



## Meeting of the Regional Planning Committee

**Date:** Wednesday 14 August 2019  
**Time:** 1.00pm  
**Venue:** Council Chamber  
Hawke's Bay Regional Council  
159 Dalton Street  
NAPIER

### Attachments Excluded From Agenda

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ITEM	SUBJECT	PAGE
<b>6.</b>	<b>Proposed TANK Plan Change 9 – Agree Amendments for Notification</b>	
Attachment 1:	TANK Draft Plan Change 9 Version 9.2 July 2019 with tracked changes	2
Attachment 2:	Modelling impact of actual and reasonable reallocation	109
Attachment 3:	Assessment of Outstanding Waterbodies and TANK Plan Changes	116
Attachment 4:	Draft Section 32 Report	130

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## TANK PLAN CHANGE PC9 – DRAFT PLAN REVIEW

Editor: Mary-Anne Baker

Date: 3<sup>rd</sup> July 2019

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Draft Version	Sent to	Issued	Comments incorporated
V3.0	TANK Members	27 February 2018	
V4.0	TANK members	31 May 2018	VC, TPG, HBRC Editing Meetings 38/39
V.5	TANK Members	27 <sup>th</sup> June	Meeting 40 TANK members including from TANK review versions 1 -3 Peer reviewer
V6	TANK Members Peer review (PlanWrite)	26 July 2018	TANK Members Stakeholder organisations Peer review
V7	TANK members Regional Planning Committee		TANK Members Stakeholder organisations Joint Working Group (Drinking Water)
V8	Regional Planning Committee	12 December	TANK Members Stakeholder organisations Joint Working Group (Drinking Water) Legal opinion

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V9	<a href="#">Pre-notification draft sent to iwi authorities and Napier City and Hastings District Councils and ministers</a> <a href="#">Also available to TANK stakeholders</a>	<a href="#">15 May</a>	<a href="#">RPC</a> <a href="#">No decisions made</a>
<a href="#">V9.1</a>	<a href="#">RPC</a>	<a href="#">3<sup>rd</sup> July</a>	<a href="#">RPC</a> <a href="#">No decisions made</a>
<a href="#">V9.2</a>	<a href="#">RPC and RPC sub-group</a>	<a href="#">14<sup>th</sup> August</a>	

TANK Plan Change ('PC9') <sup>1</sup>

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 Tūtaekuri, 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

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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 National Policy Statement for Freshwater Management 2017 and gives effect to the Council's Regional Policy Statement including in relation to protection of the values of outstanding water bodies. It has further incorporated Māori values for which all waterbodies in the TANK catchment area are to be managed. The RPS policies have 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 Wai he 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.

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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 NPSFM 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 kaitiakitanga role.

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.

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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 are 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.

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#### *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 timing and 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.

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## 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 *To be amended to delete Commercial, Fishing (eeling)* 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



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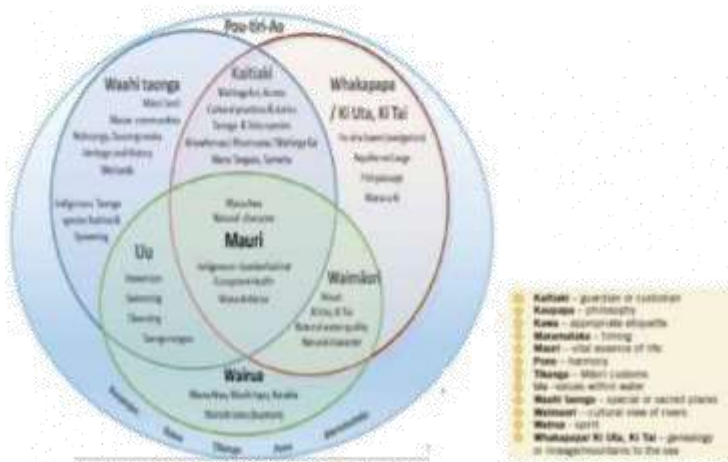
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Figure 2 shows the interrelated nature and cultural connections of the values held by Māori for water. These core values are underpinned by a philosophy of etiquette, customs, harmony and timing.

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 and Māori 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.

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## TANK OBJECTIVES

### General Objectives

**Objective 1** 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 2** When setting objectives, limits and targets;

- a) Te Mana o te Wai<sup>2</sup> 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 and the protection of indigenous biodiversity 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 significant values of the outstanding water bodies in schedule 25 and the values in the plan objectives are appropriately protected and provided for.

Deleted: The water body values listed in Table 1 (RPS)

### Climate change

**Objective 3** 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).

### Water Quality General

**Objective 4** 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

<sup>2</sup> From Objective AA and Policy AA in NP5FM

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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<sup>3</sup>.

**Objective 5** 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 6** The quality of the TANK freshwater bodies set out in Schedule 2 will be achieved through future plan changes.

**Objective 7** 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 8** 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 9** Activities in source protection areas 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

#### Catchment Objectives

**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 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<sup>4</sup>;
- e) primary production water for community social and economic well-being;

and provide for;

<sup>3</sup> 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);

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- 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 11** 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 Whanawhana 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 cultural practices of Uu and boating, including jet-boating in the braided reaches of the Ngaruroro;
- d) protection of the natural character, instream values and hydrological functioning of the Ngaruroro mainstem and 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 12** 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 **Tūtaekurī 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 cultural practices of Uu and boating;
- d) protection of the natural character, instream values and hydrological functioning of the Tūtaekurī 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;

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- 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 13** 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;

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- 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 swimming and cultural practices of Uu and 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;

and provide 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 14** 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, Tūtaekurū and Karamu rivers and their tributaries to enable;

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- 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;

and provide 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.<sup>5</sup>

**Objective 15** 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 **Wetland and lake waahi taonga** within the TANK catchments is managed so that mauri, water quality and flows, and levels are maintained and improved to enable;

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<sup>5</sup> Includes waterbodies like springs

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- a) healthy and diverse indigenous fish, bird and plant populations in wetland and lake areas and connected waterways;
- b) improved hydrological functioning in wetland and lakes and 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
- f) the protection of the outstanding values of the Kaweka Lakes, Lake Poukawa and Pekapeka Swamp and the Ngamatea East Swamp

And to;

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

#### Water quantity

**Objective 16** 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 water allocation in the following priority order:

- a) Water for the essential needs of people;
- b) The allocation and reservation of water for domestic supply including for marae and papakāinga, and for municipal supply so that existing and future demand as described in HPUDS (2017) can be met within the specified limits
- c) Primary production on versatile soils,
- d) Other primary production food processing, industrial and commercial end uses;
- e) Other non-commercial end uses

Moved (insertion) [2]

Deleted: Water is allocated for municipal and papakāinga water use

**Objective 16a** The allocation and use of water results in:

- f) the development of Māori economic, cultural and social well-being supported through regulating the use and allocation of the water available at high flows for taking, storage and use
- g) Water being available for abstraction at agreed reliability of supply standards;
- h) Efficient water use ;
- i) Allocation regimes that are flexible and responsive, allowing water users to make efficient use of this finite resource;

Moved up [2]: <R>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;¶

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**Objective 17** 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;
- d) aquifer recharge and flow enhancement
- e) Water harvesting and storage

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## 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 regulate or 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 targets shown in Schedule 1 by focussing on :
  - 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 26-29) .
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<sup>3</sup> (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 Tūtaekurī 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;

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- 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 work with mana whenua, landowners and the Napier City Council to:
- improve water clarity and reduce deposited sediment by reduce the amount of sediment being lost from land and river banks;
  - reduce risk of proliferation of algae by reducing nutrient losses from land, including through management of phosphorous loss associated with sediment;
  - 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
  - carry out further investigations to understand the estuary hydrology, functioning and environmental stressors.
6. The quality of groundwater of the Heretaunga Plains and surface waters used as source water for Registered Drinking Water Supplies will be protected, in addition to Policy 1 by the Council ;
- identifying a source protection extent for small scale drinking water supplies or a Source Protection Zones for large scale drinking water supplies around the source of any existing drinking water supply by methods defined in Schedule 10 regulating 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:
    - direct or indirect discharge of a contaminant to the source water including by overland flow or percolation to groundwater;
    - an increased risk to the safety of the water supply as a result of a non-routine event ;
    - potentially impacting on the level or type of treatment required to maintain the safety of the water supply
    - shortening or quickening the connection between contaminants and the source water, including damage to a confining layer;
    - 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 that is more than minor.
- 6a When considering applications to take water for a Registered Drinking Water Supply, the Council will;
- provide for the replacement or amendment of a source protection extent or Source Protection Zone which reflects the level of protection required for that supply, according to a method specified in Schedule 10;
  - provide for the amendment of a Source Protection Zone where new information changes the outputs from the method specified in Schedule 10
  - require applications to include an assessment of the Source Protection Zone required, taking into account the factors set out in Schedule 10;
  - have regard to:
    - the extent to which the application reflects the factors and methodology in Schedule 10 when establishing the Source Protection Zone; and
    - the impacts, including any costs and benefits, of any additional restrictions in the Source Protection Zone
    - the level of consultation with land owners in the Source Protection Zone

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7. The Council will, when considering applications to discharge contaminants or carry out land or water use activities within;
- the source protection extent for Registered Drinking Water Supplies, take into account possible contamination pathways and risks to the quality of the source water for the water supply,
  - 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;
    - the amount, concentration and type of contaminants likely to be present as a result of the activity or in any discharge;
    - the potential pathways for those contaminants, including any likely or potential preferred pathways;
    - the mobility and survival rates of any pathogens likely to be in the discharge or arising as a result of the activity;
    - 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;
    - ensuring the water supplier is aware of any abstraction of groundwater where abstraction has the potential to have more than a minor impact on flow direction or speed and/ or hydrostatic pressure.
    - 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.
    - 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;
- 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;
  - understand the nature and extent of the water resources used to supply communities, their connectivity with other waterbodies and their recharge sources,
  - 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;
  - understand risks to the quality of water used for Registered Drinking Water Supplies, including through consultation on any applicable resource applications in Source Protection Zones ;
  - maintain shared databases of activities, including information in consents for land and water use, that have the potential to adversely affect quality of water used for community supply;
  - develop solutions that address risks to water quality including wastewater reticulation solutions in Source Protection Zones;
  - 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;
- contributes to the health of aquatic ecosystems especially for indigenous species;

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- 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 and Lake Management

12. The Council will regulate activities in and adjacent to wetlands and lakes 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 Council will support and encourage the restoration and extension of natural wetlands and lakes and the reinstatement or creation of additional wetlands 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 and lake management can be improved

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- b) ; Identify priority areas where wetland extent can increased
- c) Provide information to landowners about wetland and lake values and their management;
- d) Provide funding assistance for wetland and lake protection and for construction of new wetlands and lakes;
- e) Target resources where multiple objectives can be met;  
and
- f) 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, including as a result the accumulation of toxic algal mats.

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#### 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 freshwater objectives in Schedule 1 with landowners, industry groups, and other stakeholders and will implement the following measures;
- establish programmes and processes through Farm Environment Plans, Catchment Collectives and Industry Programmes to ensure land managers;
    - adopt industry good practice;
    - identify critical source areas of contaminants at both property and catchment scale;
    - adopt effective measures to mitigate or reduce contaminant loss;
    - prepare nutrient management plans in catchment not meeting targets for dissolved nitrogen.
16. The Council will achieve or maintain the freshwater targets or freshwater objectives in Schedule 1 by;
- Gathering information to determine sustainable nutrient loads
  - Developing nutrient limits and a nutrient allocation regime if the management framework in Policy 15 is not leading to improved attribute states by the time this plan is reviewed;
  - regulating land use change where there is a significant risk of increased nitrogen loss;
  - gathering and assessing information about environmental state and trends and the impact of land use activities on these;
  - working with industry groups, landowners and other stakeholders to undertake research and investigation into;
    - nutrient pathways, concentrations and loads in rivers and coastal receiving environments;
    - nutrient uptake and loss pathways at a property scale;
    - 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;
- regulating cultivation, stock access and vegetation clearance activities;
  - 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;
  - 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;
  - 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;
    - targeting resources where multiple objectives can be met;
    - and supporting landowners to retire land, establish forests where appropriate, and plant trees on land with high actual or potential erosion risk;
  - 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

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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.

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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;
  - c) take appropriate enforcement action.

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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

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

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## STORMWATER MANAGEMENT -

### Urban Infrastructure

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26. The adverse effects of stormwater quality and quantity on aquatic ecosystems and community well-being arising from existing and new urban development (including infill development) industrial and trade premises and associated infrastructure, will be reduced or mitigated no later than 1 January 2025, by:
- Local Authorities adopting an integrated catchment management approach to the collection and discharge of stormwater
  - 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;
  - requiring increased retention or detention of stormwater, while not exacerbating flood hazards;
  - taking into account site specific constraints including areas with high groundwater, source protection zones, and/or an outstanding water body;
  - 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;
  - taking into account the effects of climate change when providing for new and upgrading existing infrastructure;
  - adopting, where practicable, a good practice approach to stormwater management including adoption of Low Impact Design for stormwater systems
  - amending district plans, standards, codes of practice and bylaws to specify design standards for stormwater reticulation and discharge facilities through consent conditions, that will achieve the freshwater objectives set out in this plan
  - developing and making available to the public advice about good stormwater management options (including through HBRC's guidelines)
  - encouraging, through education and public awareness programmes, greater uptake and installation of measures that reduce risk of stormwater contamination;
  - requiring, no later than 1 January 2025, the preparation and implementation of a site management plan and good site management practices on industrial and trade premises with a high risk of stormwater contamination and those in the high priority areas:
    - of the Ahuriri catchment;
    - of the Karamu River and its tributaries;
    - of land over the unconfined aquifer and
    - within identified drinking water Source Protection Zones.

### Source Control

27. Sources of stormwater contamination and contaminated stormwater will be reduced by:
- 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 water or the discharge to a stormwater or drainage network;

Deleted: 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:

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- 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 contaminants;~~
- c) Controlling, and if necessary avoiding, activities that will result in water quality standards not being able to be met.

#### Dealing with the Legacy

28. Aquatic ecosystem health improvements and ~~community wellbeing and~~ reduced stormwater contamination will be achieved by HBRC ~~working~~ with the Napier City and Hastings District Councils ~~requiring discharges from stormwater networks to meet:~~

- a) ~~water quality objectives (where they are degraded by stormwater) and the identification of measures that ensure stormwater discharges will achieve at least:~~
  - (i) ~~the 80th percentile level of species protection in receiving waters by 1 January 2025 and~~
  - (ii) ~~the 95th percentile level<sup>6</sup> of species protection by 31 December 2040,~~

and

- b) ~~except as in (a) above, the management objectives in Schedule 1 for freshwater and estuary health through resource consent conditions, including requirements,~~
  - (i) ~~to apply the Stream Ecological Valuation methodology to inform further actions;~~
  - (ii) ~~to install treatment devices within the drainage network where appropriate;~~
  - (iii) ~~for stream planting/re-alignment for aquatic ecosystem enhancement;~~
  - (iv) ~~for wetland creation, water sensitive design and other opportunities for increasing stormwater infiltration where appropriate;~~
  - (v) ~~Recognise existing and planned investments in stormwater infrastructure.~~

and

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

29. To achieve the freshwater quality objectives in this Plan, HBRC, with the Napier City and Hastings District Councils will, ~~no later than 1 January 2025,~~ implement similar ~~stormwater~~ performance standards including through the adoption of:

- a) ~~good practice engineering standards;~~
- b) ~~Consistent~~ plan rules and bylaws;
- c) shared ~~information and~~ approaches to education and advocacy;
- d) shared ~~information and~~ processes for monitoring and auditing individual site management on sites at high risk of stormwater contamination;
- e) consistent levels of service for stormwater management and infrastructure design;
- f) an integrated stormwater catchment management approach;
- g) ~~undertaking a programme of mapping the stormwater networks and recording their capacity;~~
- h) aligning resource consent processes and having joint hearings to achieve integrated management of ~~proposals for urban activities~~ particularly in respect of stormwater, water supply and wastewater provisions and implementation of the HPUDS.

<sup>6</sup> ANZECC Guidelines 2018 (Australia and New Zealand Guidelines for Fresh and Marine Water Quality)

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Deleted: <del>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.</del>

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Ahuriri Catchment

30. The Council will support the development of an Ahuriri Estuary Integrated Catchment Management Plan (ICMP) by:

- a) improving the quality of freshwater entering the Ahuriri Estuary through the measures included in this plan
- b) and carrying out investigations to help better understand processes and functions occurring within the estuary and its connected freshwater bodies.

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#### MONITORING and REVIEW

31. The Council will recognise and support monitoring according to mātauranga Māori and will recognise and support local scale monitoring to assess ecosystem health and mauri including water quality in relation to identified values and its contribution to:

- a) understanding local ecosystem health and land and water use impacts on it
- b) enabling kaitiaki and resource users' 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.

32. Council will meet regularly with representatives from TANK stakeholder groups to:

- a) Review and report on the TANK implementation plan,
- b) Identify issues arising and develop measures to enable their resolution

33. The Council will monitor and report on 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 in-stream 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 of this Plan 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.

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#### MINIMUM FLOW REGIMES, GROUNDWATER LEVELS AND ALLOCATION LIMITS;

##### Heretaunga Plains Freshwater Quantity Management

34. The Council recognises the actual and potential adverse effects of groundwater abstraction in the Heretaunga Plains Water Management Unit 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;
- e) tikanga and mātauranga Māori.

and will carry out the following management steps to mitigate the effects of groundwater abstraction and avoid further adverse effects;

- f) still to be confirmed as either;
  - (i) adopt an interim groundwater allocation limit of 80 Mm<sup>3</sup> per year;
  - (ii) adopt an interim limit based on the actual and reasonable water use prior to 2017
- g) avoid re-allocation of any water that might become available within the interim groundwater allocation limit or within the limit of any connected water body until there has been a review of the relevant allocation limits within this plan;
- h) manage the Heretaunga Plains Water Management Unit as an over-allocated management unit and avoid any new allocations of groundwater;
- i) when considering applications in respect of existing consents due for expiry, or when reviewing consents, to
  - (i) allocate groundwater the basis of the maximum quantity that is able to be abstracted during each year or irrigation season expressed in cubic meters per year;
  - (ii) apply an assessment of actual and reasonable use that reflects the land use and water use investment authorised in the ten years up to August 2017 (except as provided by Policy 47);
- j) mitigate stream depletion effects on lowland streams by providing for stream flow maintenance and habitat enhancement schemes.

35. The Council will restrict the re-allocation of 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 maintenance

36. When assessing applications to take groundwater in the Heretaunga Plains Water Management Unit the Council will;

- a) Either;
  - (i) require abstraction to cease when an applicable stream flow maintenance scheme trigger is reached
  - or
  - (ii) enable consent applicants to develop or contribute to stream flow maintenance and habitat enhancement schemes that;

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1. ~~contribute flow to~~ lowland rivers where groundwater abstraction is depleting stream flows and;
  2. improve oxygen levels and reduce water temperatures;
  - b) assess ~~relative~~ the contribution to stream depletion from groundwater takes and ~~require stream depletion to be off-set equitably by~~ consent holders while providing for exceptions for the use of water for essential human health; and
  - c) ~~enable~~ permit holders to progressively and collectively develop and implement flow maintenance and habitat enhancement schemes as water permits are replaced or reviewed, in the order consistent with water permit expiry dates;
37. ~~When assessing applications for a stream flow maintenance and habitat enhancement scheme the Council will take into account;~~
- a) ~~opportunities for maximising the length of waterbodies where habitat and stream flow is maintained or enhanced;~~
  - b) ~~any improvements to water quality and ecosystem health as a result of the stream flow maintenance and habitat enhancement schemes ;~~
  - c) ~~the duration and magnitude of adverse effects as a consequence of flow maintenance scheme operation;~~
  - d) ~~consultation with mana whenua~~
  - e) ~~and will~~
    - (i) ~~allow site to site transfer of water to enable the operation of a flow enhancement scheme~~
    - (ii) ~~enable water permit holders to work collectively to develop and operate stream flow maintenance and habitat enhancement schemes (Schedule 11)~~
38. 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
39. After water has been re-allocated and consents reviewed in accordance with Policies 34 and 35, 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 extent of any stream flow maintenance and habitat enhancement schemes including in relation to;~~
    - (i) ~~the length of stream subject to flow maintenance~~

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(ii) the extent of habitat enhancement including length of riparian margin improvements, and new or improved wetlands;

(iii) the magnitude and duration of stream flow maintenance scheme operation;

(iv) trends in state of in oxygen and temperature of affected streams.

(v) ;

And will:

e) In relation to plan objectives and adverse effects listed in Policy 34, assess

(i) the effects of the groundwater takes on stream flows;

(ii) effectiveness of stream flow maintenance schemes in maintaining water flows and improving water quality

(iii) effectiveness of habitat enhancement including through improved riparian management and wetland creation in meeting freshwater objectives;

f) review the appropriateness of the allocation limit in relation to the freshwater objectives;

g) develop a plan change to ensure any over-allocation is phased out.

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## SURFACE WATER LOW FLOW MANAGEMENT

### Flow Management Regimes

40. 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<sup>2</sup>
- 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 Tūtaekurī River;

- e) increasing the minimum flow for the Tūtaekurī 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 Tūtaekurī 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 Tūtaekurī 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;

<sup>2</sup> The security of supply for each water body needs to be collated and included within the plan (schedule 6)

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- 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) ~~providing that the abstraction of water that has been taken and stored at times of high flow and released for subsequent use is not subject to allocation limits.~~
- m) ~~requiring water meters to be installed for all water takes authorised by a water permit and water use to be recorded and reported via telemetry provided that telemetry will not normally be required where the consented rate of take is less than 5l/sec or where there are technical limitations to its installation.~~
- n) 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.
- o) 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 ~~an applicable~~ lowland stream enhancement programme at a rate equivalent to the stream depletion effect consistent with Policy 36;
  - 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 ~~an applicable~~ lowland stream enhancement;
  - and
  - (iii) ~~allowing~~ further technical assessments to determine the extent of stream depletion effect.

#### GENERAL WATER ALLOCATION POLICIES

Water Use and Allocation – Efficiency

41. 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 ~~specified~~ limits.
- d) 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;

42. ~~Except as provided by Policies 34 and 36,~~ 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:

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- (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 water application efficiency standard of 80% and on a reliability standard that meets demand 95% of the time.
- 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

43. 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 Schedule 25 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.
  - h) enabling the transfer of a point of take and change of water use to municipal water supplies, including for marae and papakainga, (not including transfer to industrial uses above 15m<sup>3</sup>/day) from any other use for the efficient delivery of water supplies and to meet the communities' human health needs for water supply, subject to clause (b).

#### Water Allocation - Permit Duration

44. 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

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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 cumulative consented water takes within the water management zone and the Council;

- a) 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.
- b) will impose a consent duration for municipal supply consistent with the most recent HPUDS and will impose consent review requirements that align with the expiry of all other consents in the applicable management unit.
- c) may grant consents granted within three years prior to the relevant common catchment expiry date 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

45. 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 whether an Infrastructure Leakage Index of 4 or better can be achieved.
    - (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.
  - c) work collaboratively with Napier City and Hastings District Councils to:
    - (i) develop an integrated planning approach thorough HPUDS that gives effect to the National Policy Statements within the limits of finite resources
    - (ii) develop a good understanding of the present and future regional water demand and opportunities for meeting this.
    - (iii) identify communities at risk from low water reliability or quality and investigate reticulation options.
46. When making water shortage directions under Section 329, occurring when rivers have fallen below minimum flows and water use has decreased or ceased according to permit conditions, the Council will establish and consult with an emergency water management group that shall have representatives from Napier City and Hastings District Councils, NZ Fire Service, DHB, iwi and MPI, to make decisions about providing for water uses in the following priority order;
- a) water for the maintenance of public health;

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- b) water necessary for the maintenance of animal welfare
- c) ~~water essential for community well-being and health.~~
- d) ~~Water essential for survival of horticultural tree crops~~
- 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 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

47. ~~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> );
- 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 (except as provided for by Policy 4.5 urban water use);
  - (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 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) ~~Prevent site to site transfers of allocated but unused water that does not meet the definition of actual and reasonable use;~~
- 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 or well sharing or global water permits;
- h) enabling and supporting the rostering of water use or reducing the rate of takes in order to avoid ~~water use~~ restrictions at minimum or trigger flows;

#### Frost Protection

48. When considering applications for resource consent to take water for frost protection, ~~the Council will avoid, remedy or mitigate actual and potential effects of the take on its own or in combination with other water takes;~~

- a) from groundwater in the HPWMZ on;
  - (i) neighbouring bores and existing water users;
  - (ii) connected surface water bodies;

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(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 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 in relation to minimum flows or groundwater levels

e) requiring water metering, monitoring and reporting use of water for frost protection

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## HIGH FLOW ALLOCATION REGIME

### Adverse Effects - Water Damming

49. 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 [the objectives](#);
  - (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 dam;
  - (vii) other water users;
  - (viii) downstream river bed stability, including through sediment transfer and management of vegetation in river beds
- c) whether there are practicable alternatives

And, except as prohibited by Policy 53, 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 [adversely](#) affect the frequency of flows above three times the median flow by more than [a minor amount](#) 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 specified flow triggers.

### Adverse Effects - Water Take and Storage

50. 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 [the objectives](#);
  - (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;

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and will limit the amount of flow alteration so that the taking of surface water does not cumulatively adversely affect the frequency of flows above three times the median flow by more than a minor amount 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

51. 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 in Schedule 25 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.

52. 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 51 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.

53. The Council will protect the instream water values and uses identified in Objectives 11 and 12 for the Ngaruroro and Tūtaekuri Rivers and their tributaries, the Taruarau, Omahaki, Mangatutu and Mangaone Rivers by prohibiting the construction of dams on the mainstem of those rivers.

#### High Flow Reservation

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

- a) contribution to environmental enhancement that is in addition to any conditions imposed on the water storage proposal;
- b) improvement of access to water for domestic use by marae and papakainga;
- c) The use of water for any activity, provided that
  - (i) it includes contribution to a fund managed by the Council in consultation with mana whenua
  - (ii) the fund will be used to provide for development of Māori wellbeing

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(iii) the contribution to the fund is proportional to the amount of reserved water being taken and any commercial returns resulting from the application

d) the development of land returned to a PSGE through a Treaty Settlement.

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

- e) require information to be provided that demonstrates how the activity will provide for Māori economic, cultural or social well-being;
- f) have regard to the views of any affected PSGE or iwi authority arising from consultation about the application and any assessment of the potential to provide part, or all of the 20% high flow allocation
- g) have regard to any relevant provisions for the storage and use of high flow allocation water for Māori development in any joint iwi/hapū management plans relevant to the application (where more than one PSGE, iwi/hapū is affected, the iwi management plan must be jointly prepared by the affected iwi/hapū).

55. 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 for the provision of the high flow water allocated to Māori development is not appropriate or feasible, and the reasons why this is the case.

#### SPECIFIC POLICIES

##### Paritua/Karewarewa Streams

56. 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;

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- (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.

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## RULES

## Production Land

RULE	ACTIVITY	STATUS	CONDITIONS/STANDARDS/TERMS	MATTERS
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	<p>a) The property or farming enterprise land area has less than 75% plantation forest cover.</p> <p>b), Either;</p> <ol style="list-style-type: none"> <li>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.</li> <li>Or;</li> <li>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; <ol style="list-style-type: none"> <li>1. the Council shall be provided with the Farm Environment Plan upon request</li> <li>2. information about the implementation of the mitigation measures identified for the property shall be supplied to the Council on request</li> </ol> </li> </ol> <p><b>Stock Exclusion:</b></p> <p>(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;</p> <ol style="list-style-type: none"> <li>(i) stock are at a stocking rate less than 18su/ha in the paddock adjacent to the river the stock have access to and</li> <li>(ii) The slope over 60% or more of the paddock is greater than 15 degrees.</li> </ol>	

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			<p>(d) Rivers that are crossed by formed stock races are bridged or culverted by 31 May 2023.</p> <p>(e) The entry into or over the bed of any river, lake or wetland by cattle, deer and pigs <b>not</b> permitted by condition (d) is a permitted activity until 31 May 2023.</p> <p>(f) Conditions (c) to (e) apply only to rivers with an active formed channel.</p>	
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	<p>The activity does not meet condition (b) of Rule TANK1.</p> <p>1. The <u>freshwater</u> water quality <u>objectives</u> 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;</p> <ol style="list-style-type: none"> <li>Efficient use of nutrients and minimisation of nutrient losses,</li> <li>Wetland management</li> <li>Riparian management</li> <li>Management of farm wastes</li> <li>Management of stock including in relation to water ways and contaminant losses to ground and surface water</li> <li>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</li> <li>Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply</li> </ol> <p>2. Nature and scale of actual and potential contamination loss from the property in relation to the objectives specified in Schedule 1</p> <p>3. Timeframes for any alternative mitigation measures</p> <p>4. Duration of consent</p> <p>5. Lapsing of consent</p> <p>6. Review of consent conditions;</p> <p>7. The collection, recording, monitoring and provision of information concerning the exercising of the consent</p> <p>Non Notification provision to be inserted with this rule</p>	<p>Deleted: s</p> <p>Deleted: Dec2018</p> <p>Deleted: limits</p>

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<b>TANK 3 Stock Access</b>	<b>Stock Access to rivers lakes and wetlands</b>	<b>Restricted Discretionary</b>	The activity does not meet any one of the conditions (c) – (e) of Rule TANK 1	<ol style="list-style-type: none"> <li>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</li> <li>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;</li> <li>3. Whether stock exclusion is practicable in the circumstances including in relation to;               <ol style="list-style-type: none"> <li>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</li> <li>b) technical or practical challenges of any works required for stock exclusion to be effective</li> <li>c) potential costs and benefits provided by alternative measures compared to stock exclusion</li> </ol> </li> <li>4. Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply</li> <li>5. Timeframes for any alternative mitigation measures</li> <li>6. Duration of consent</li> <li>7. Lapsing of consent</li> <li>8. Review of consent conditions;</li> <li>9. The collection, recording, monitoring and provision of information concerning the exercising of the consent</li> </ol>
<b>TANK 4 Production Land Use</b>	<b>The changing of a use of production land on farm properties or</b>	<b>Controlled</b>	<ol style="list-style-type: none"> <li>a) Any change to the production land use activity commencing after &lt;date of notification&gt; is over more than 10% of the property or farming enterprise area.</li> <li>b) The production land is subject to a Catchment Collective Programme meeting the requirements of Schedule 5B by a</li> </ol>	<ol style="list-style-type: none"> <li>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</li> <li>2. The measures being undertaken by the TANK Landowner Collective in undertaking measures to meet water quality</li> </ol>

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	<p>farm 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)</p>		<p>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)</p>	<p>objectives, including how the effect of the new land use activity on contributing to the water quality objectives is being collectively addressed including by;</p> <ol style="list-style-type: none"> <li>Efficient use of nutrients and minimisation of nutrient losses,</li> <li>Wetland management</li> <li>Riparian management</li> <li>Management of farm wastes</li> <li>Management of stock including in relation to waterways and contaminant losses to ground and surface water</li> <li>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</li> <li>Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply</li> </ol> <ol style="list-style-type: none"> <li>Timeframes for any alternative mitigation measures</li> <li>Duration of consent</li> <li>Lapsing of consent</li> <li>Review of consent conditions</li> <li>The collection, recording, monitoring and provision of information including Overseer or alternative model files,</li> </ol> <p>Non Notification provision to be inserted with this rule</p>
TANK 4a Production Land Use	<p>The changing of a use of production land on farm properties or farming enterprises that are greater than 10 hectares in the TANK</p>	Restricted Discretionary	<p>a) The production land use activity does not meet the conditions of TANK 4. b) Any change to a production land use activity over more than 10ha of the property or enterprise area commencing after &lt;date of notification&gt; that results in the annual nitrogen loss increasing by more than the applicable amount shown in Table 2 in Schedule 4..</p>	<ol style="list-style-type: none"> <li>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</li> <li>Whether water quality limits and targets in Schedule 1 are being met in the catchment where the new activity is to be undertaken.</li> <li>The extent to which the land use change will affect the ability to meet water quality objectives</li> <li>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;</li> </ol>

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	catchments pursuant to s9(2) RMA and associated non-point source discharges pursuant to Section 15 (RMA)			<ul style="list-style-type: none"> <li>a) Efficient use of nutrients and minimisation of nutrient losses,</li> <li>b) Wetland management</li> <li>c) Riparian management</li> <li>d) Management of farm wastes</li> <li>e) Management of stock including in relation to waterways and contaminant losses to ground and surface water</li> <li>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</li> <li>g) Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply</li> </ul> <ul style="list-style-type: none"> <li>5. Timeframes for any alternative mitigation measures</li> <li>6. Duration of consent</li> <li>7. Lapsing of consent</li> <li>8. Review of consent conditions</li> <li>9. The collection, recording, monitoring and provision of information including Overseer or alternative model files,</li> </ul>
Amend existing rule 7	Indigenous vegetation clearance	Permitted	<p>An RRMP amendment to Rule 7 to include an exception for land disturbance activities in the TANK catchments.</p> <p>f). In the TANK catchments, there is no clearance of indigenous vegetation within 10m of any rivers (ref maps/zones) except</p> <ul style="list-style-type: none"> <li>(i) where the activity is subject to a management plan prepared as part of the NESPF requirements</li> <li>(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</li> <li>(iii) where the clearance it is associated with construction of crossings or installation of reticulated or network service.</li> </ul>	

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Amend existing rule 7	Cultivation – steep land	Permitted	An RRMP amendment to rule 7 to include an exception for soil disturbance activities in the TANK catchments;  g). In the TANK catchments there is no cultivation of land (ref maps/zones) over 20° except; (i) where the activity is subject to a management plan prepared as part of the NESPF requirements (ii) where it is less than 10% of the paddock area.
Amend existing rule 7	Cultivation - Setbacks	Permitted	An RRMP amendment to rule 7 to include an exception for soil disturbance activities in the TANK catchments;  h. In the TANK catchments, there is no cultivation of land (ref maps/zones) that results in exposure of bare soil within; (i) 5 m of any river, modified watercourse or drain or lake or wetland where the land is flat to gently rolling (0-7°) (ii) 10 m of any river, modified watercourse or drain or lake or wetland where the land is moderately rolling (>7 – 20°) (iii) 15 m of any river, modified watercourse or drain or lake or wetland where the land is over 20°  except (iv) except where the activity is subject to a management plan prepared as part of the NESPF requirements (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 (vi) where the cultivation is in relation to activities permitted by Rule 7D.
<b>Note for Rule 7:</b> 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.			

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## Water – Take and Use

RULE	ACTIVITY	STATUS	CONDITIONS/STANDARDS/TERMS	MATTERS
TANK 5 Surface Water	The take and use of surface water in the TANK water Management Zones including under Section 14(3)(b) of the RMA	Permitted	<p>a) Except as provided by condition (b), the take is not from any of the following rivers or their tributaries, or Water Management Zones;</p> <p>Maraekakaho Stream</p> <p>Ahuriri Water Management Zone</p> <p>Awanui Stream and its tributaries</p> <p>Lake Poukawa Water Management Zone</p> <p>Louisa Stream</p> <p>b) The take does not exceed 5 cubic metres per day per any one property except;</p> <p>(i) Takes existing as at &lt;date of notification&gt; 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.</p> <p>(iii) 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.</p> <p>c) The taking of water does not cause any stream or river flow to cease.</p> <p>d) Fish, <del>including</del> eels shall be prevented from entering the reticulation system</p> <p><i>A Means of Compliance for Condition d)</i>  <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.</i></p>	

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			<p>e) The activity shall not cause changes to the flows or levels of water in any connected wetland.</p> <p>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.</p>
TANK 6 Groundwater takes	The take and use of groundwater in the TANK Water Management Zones including under Section 14(3)(b) of the RMA	Permitted	<p>a) Except as provided by condition (b)(i) for existing activities, the take is not from the Lake Poukawa Freshwater Management Sub-unit (Quantity).</p> <p>b) There is only one point of take per property and the take does not exceed 5 cubic metres per day except:</p> <ul style="list-style-type: none"> <li>(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.</li> <li>(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.</li> <li>(iii) The taking of water for aquifer testing is not restricted</li> </ul> <p>c) The rate of take shall not exceed 10 l/s other than aquifer testing for which the rate of take is not restricted.</p> <p>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.</p> <p>e) The take shall not cause changes to the flows or levels of water in any connected wetland.</p>

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			f) Backflow of water or contaminants into the bore shall be prevented	
TANK 7 Re-application for water permits – groundwater in HPWMZ	Application to continue to take water from the Heretaunga Plains Water Management Unit in respect of applications subject to section 124	Restricted Discretionary	<p>a) The taking and use of water from the <b>Heretaunga Plains Water Management Unit (Quantity)</b> does not comply with the conditions of rules TANK 6.</p> <p><del>b) An application is either for the continuation of a water take and use previously authorised or is a joint or global application that replaces existing water permits previously held separately or individually.</del></p> <p><b>Actual and Reasonable Re-allocation*</b></p> <p>c) <del>Except as provided by matter 1,</del> The amount taken and used for irrigation is the <b>actual and reasonable</b> amount</p> <p>d) the amount taken and used for municipal, community and papakāinga water supply is:</p> <p>(i) the quantity specified on the permit being renewed; or</p> <p>(ii) any lesser rate applied for</p> <p>e) <del>Except as provided by matter 2 and other than as provided in (c) or (d)</del> the amount taken and used is the least of:</p> <p>(iii) the quantity specified on the permit due for renewal or</p> <p>(iv) any lesser rate applied for</p> <p>(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)</p> <p><b>Stream Flow Maintenance Scheme</b></p> <p>f) <del>The water permit holder (or the person giving effect to the permit) is either a member of a Water User Collective that complies with the requirements of Schedule 12, or</del></p>	<p>The Council will impose conditions in respect of the following matters;</p> <p>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;</p> <p>a. the completeness of the water permit and water meter data record;</p> <p>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;</p> <p>c. effects of water sharing arrangements</p> <p>d. crop rotation/development phases</p> <p><del>2. The extent to which the application was subject to programmed or staged completion of authorised major infrastructure developments over time.</del></p> <p>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</p> <p>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 6, and rates of take to limit drawdown effects on neighbouring bores.</p> <p>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</p> <p>6. For applications to take water for municipal, community and papakāinga water supply;</p>

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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

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		<p><u>The water take ceases when the flow in the affected stream fall below the specified trigger level in Schedule 6</u></p> <p>g) Any take authorised under clause (d) is not subject to conditions (f) in respect of that part of the total allocated amount used for essential human health.</p> <p><b>General Conditions</b></p> <p>i) A water meter is installed</p> <p>j) Back flow of water or contaminant entry into the bore shall be prevented</p> <p><u>Advisory Note:</u>  <u>Any application to change water use as specified under (c) (d) or (e) may trigger a consent requirement under rule TANK 4 or 4a</u></p>	<p>a. provisions for demand reduction and asset management over time so that water use is at reasonable and justifiable levels including <u>whether</u> an Infrastructure Leakage Index of 4 <u>or better will be achieved.</u></p> <p>b. Rate and volumes of take limited to the projected demand for the urban area provided in the HPUDS 2017.</p> <p>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</p> <p>7. The effects of any water take and use for frost protection on the flows in connected surface water bodies.</p> <p>8. 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%</p> <p>9. 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.</p> <p>10. Management of bores including means of backflow prevention and ensuring well security.</p> <p>11. Information to be supplied and monitoring requirements including timing and nature of water metering data reporting and the installation of telemetered recording and reporting</p> <p>12. The duration of the consent (Section 123 of the Act) as provided for in Schedule 8; timing of reviews and purposes of reviews (Section 128 of the Act).</p> <p>13. Lapsing of the consent (Section 125(1)).</p> <p><u>14. Stream flow depletion amount in litres per second calculated using the Stream Depletion Calculator</u></p> <p><u>15. Membership requirements of a stream flow maintenance and habitat enhancement scheme as specified in Schedule 11.</u></p>
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TANK 8 Surface and groundwater water takes (abstraction at low flows)	Application to continue to take and use water in respect of permits subject to section 124	Restricted Discretionary	<p>a) The take is not from the Heretaunga Plains Freshwater Management Unit (quantity)</p> <p>b) The taking and use of water from surface or groundwater water bodies does not comply with conditions of TANK 5, or TANK 6.</p> <p>c) The application is for the continuation of a water take and use <u>previously</u> authorised in a water permit that was issued before &lt;proposed plan date&gt; except;</p> <p>(i) where the consent being renewed includes any condition restricting takes at flows that are higher than the applicable flow specified in Schedule 6;</p> <p>d) <u>An application is either for the continuation of a previously authorised water take or is a joint or global application that replaces existing water permits previously held separately or individually</u></p> <p><b>Actual and Reasonable Re-allocation</b></p> <p>e) <u>Exceeds as provided by matter 1,</u> the amount taken and used for irrigation is the actual and reasonable amount</p> <p>f) The amount taken and used for municipal, community and papakāinga water supply is:</p> <p>(i) the quantity specified on the permit being renewed; or</p> <p>(ii) any lesser rate applied for</p> <p>g) Other than as provided in (c) or (d) the amount taken and used is the least of:</p> <p>(i) the quantity specified on the permit due for renewal or</p> <p>(ii) any lesser rate applied for</p> <p>(iii) the maximum annual water use in any one year within the 10 years preceding &lt;date of notification&gt; (including as demonstrated by accurate water meter records)</p>	<p>The Council will restrict its discretion to the following matters;</p> <ol style="list-style-type: none"> <li>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;             <ol style="list-style-type: none"> <li>a. the completeness of the water permit and water meter data record;</li> <li>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;</li> <li>c. effects of water sharing arrangements</li> <li>d. crop rotation/development phases</li> </ol> </li> <li>2. 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</li> <li>3. 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 6.</li> <li>4. 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</li> <li>5. For applications to take water for municipal, community and papakāinga water supply;             <ol style="list-style-type: none"> <li>a. provisions for demand reduction and asset management over time so that water use is at reasonable and justifiable levels including <u>whether an Infrastructure Leakage Index of 4 or better will be achieved.</u></li> </ol> </li> </ol>
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		<p><b>Surface Water Management (quantity)</b></p> <p>h) Any take from groundwater in Zone 1 authorised as at &lt;date of notification&gt; in any surface Water Management Unit (quantity) is subject to either:</p> <p>(i) a restriction in water flow when the applicable minimum flow is reached in the relevant zone (as shown in <a href="#">Schedule 6</a>)</p> <p>Or</p> <p>(ii) the take complies with conditions (i) and (g) of rule TANK 7 <a href="#">where there is an applicable scheme</a></p> <p><b>General Conditions</b></p> <p>i) A water meter is installed.</p> <p>j) Fish and eels are prevented from entering the reticulation system</p> <p>A Means of Compliance for Condition j)</p> <p>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.</p> <p>k) Back flow of water or contaminants into any bore shall be prevented</p> <p><b>Advisory Note:</b> Any application to change water use as specified under (c) (d) or (e) may trigger a consent requirements under rule TANK 4 or 4a</p>	<p>b. Rate and volumes of take limited to the projected demand for the urban area provided in the HPUDS 2017.</p> <p>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</p> <p>6. The location of the point(s) of take</p> <p>7. The effects of any water take and use for frost fighting on the natural flow regime of the river.</p> <p>8. Information to be supplied and monitoring requirements including timing and nature of water meter data reporting and the installation of telemetered recording and reporting.</p> <p>9. 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%</p> <p>10. 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.</p> <p>11. Management of bores and other water take infrastructure including means of backflow prevention.</p> <p>12. The duration of the consent (Section 123 of the Act) as provided for in Schedule 8 timing of reviews and purposes of reviews (Section 128 of the Act).</p> <p>13. Lapsing of the consent (Section 125(1)).</p> <p>14. For takes from Zone 1 in the Ngaruroro and Tūtaekuri 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).</p>
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				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)	The take and use of surface (low flow allocations) or groundwater	Discretionary	<p>a) The take and use does not comply with the conditions of TANK 7 and TANK 8</p> <p>b) 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 6 <del>except this clause does not apply to takes:</del></p> <p>(i) <del>for frost protection</del></p> <p>(ii) <del>for stream flow enhancement</del></p> <p><del>takes of water associated with the release of water from a water storage impoundment.</del></p>	Note that this rule allows for applications for stream flow enhancement water. The discharge of that water is managed by RRMP Rule 31, which is amended as part of this Plan Change
TANK 10 <del>Groundwater and Surface water takes</del>	The take and use of surface or groundwater	Non-complying	a) <del>The activity does not comply with the conditions of TANK 9</del>	
TANK 11 Taking water – high flows	The taking of surface water at times of high flow for storage in an impoundment	Discretionary	<p>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</p> <p>b) The take to storage does not breach the applicable minimum flow as shown for the relevant river in Schedule 7</p> <p>c) <del>The activity either on its own or in combination with other activities does not cause the flow regime of the river to be altered by more than the amount specified in schedule 7.</del></p>	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).
TANK 12 Damming	Damming of surface waters and discharge from dams	Discretionary	a) <del>The activity either on its own or in combination with other dam or discharge activities in the same water management zone does not cause the flow regime of</del>	

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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

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	<u>except as prohibited by TANK 14</u>		<u>the river to be altered by more than the amount specified in Schedule 7</u>	
<b>TANK 13</b> Take and use from storage	<b>Take and use from a dam or water impoundment</b>	<b>Discretionary</b>	<p>b) <u>The activity does not comply with TANK 5</u></p> <p>c) <u>The activity either on its own or in combination with other dam or discharge activities in the same water management zone does not cause the flow regime of the river to be altered by more than the amount specified in Schedule 7</u></p>	
<b>TANK 13A</b> <u>Take and use from storage</u>	<u>Take and use from a dam or water impoundment</u>	<b>Non-complying</b>	<u>The activity does not comply with the conditions of TANK 11 - 13</u>	
<b>TANK 14</b> Damming	<b>Construction of Dams or the damming of water</b>	<b>Prohibited</b>	<p>On the mainstem of the following rivers</p> <p>a) Ngaruroro River and its tributaries:</p> <p>(i) Taruarau River</p> <p>(ii) Omahaki River</p> <p>b) Tūtaekuri River and its tributaries:</p> <p>(i) Mangaone River</p> <p>(ii) Mangatutu River</p> <p>No application may be made.</p>	
<b>TANK 15</b> <u>Stream Flow Maintenance and Habitat Enhancement Scheme</u>	<u>Transfer and Discharge of groundwater into surface water in the Heretaunga Plains Water Management unit (quantity)</u>	<b>Restricted Discretionary</b>	<p>a) <u>The transfer and discharge of water is managed according to the applicable requirements of Schedule 11</u></p>	<p>1. <u>Rate and timing of the discharge</u></p> <p>2. <u>The quality of the groundwater and the quality of the receiving water</u></p> <p>3. <u>Location of the points of discharge and take</u></p> <p>4. <u>Riparian land management along affected streams</u></p> <p>5. <u>Information to be supplied and monitoring requirements including rate and volume of discharge and the timing and nature of water quality and ecosystem health monitoring</u></p> <p>6. <u>The duration of the consent and the timing of reviews and purpose of reviews, and subject to the findings of any review under policy 39</u></p> <p>7. <u>Lapsing of consent</u></p>

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## Discharge Activities

RULE	ACTIVITY	STATUS	CONDITIONS/STANDARDS/TERMS	MATTERS
Rule	Activity	Classification	Conditions/standards/terms	Matters for control/discretion
Rule 31	Discharge of water in to water	Permitted	Insert new condition; (d) The discharge is not discharge of groundwater into surface water in the Heretaunga Plains Groundwater Management Unit	
RRMP Rule 32 Drainage water	Diversion and discharge of land drainage water into water (gravity drainage systems)	Permitted	Insert at the end of condition (f); Except in the TANK WMZ  (g) After <ten years after date of notification> in the TANK WQMZs dissolved nutrient and sediment concentrations in the receiving water after reasonable mixing, shall not increase as a result of the discharge when measuring: (i) DIN (ii) DRP (iii) suspended sediment	
New RRMP rule 33A Drainage water	The diversion and discharge of land drainage water from an existing pumped drainage system (small scale)	Permitted	a) the discharge is in a TANK Water Quality Freshwater Management Unit b) The pumped drainage system existed at <date of notification> c) The land area being serviced by the drainage network is less than 10ha 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. e) The discharge shall not cause any scouring or erosion of any land or any watercourse beyond the point of discharge. f) The activity shall not result in changes to water levels in any connected wetland 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. 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.	

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			<p>i) After &lt;ten years after date of notification&gt; in the TANK FQMU dissolved nutrient and sediment concentrations in the discharge water are no more than in the receiving water <u>after reasonable mixing, shall not increase as a result of the discharge when measuring</u></p> <p>(i) DIN (ii) DRP (iii) suspended sediment</p>	
RRMP Rule 33 Drainage water	Discharge of Drainage water	Controlled	<p>Insert at the end of condition (f); Except in the TANK FMUs (quality)</p> <p>(g) After &lt;ten years after date of notification&gt; in the TANK FMUs (quality) 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</p> <p>(i) DIN (ii) DRP (iii) suspended sediment</p>	<p>For activities carried out in the TANK FMUs (quality) , add additional Matter of Control:</p> <p>h. Measures or methods required for meeting the receiving water quality standards. i. Monitoring for water quality</p>
RRMP Rule 1 Bore drilling	The drilling, construction and alteration of bores	Controlled	<p>Insert after a);</p> <p>b) The bore is not located within a Source Protection Zone</p>	
RRMP Rule 2 Bore drilling		Restricted discretionary	<p>Insert after e);</p> <p>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.</p>	
RRMP Rule 2 Decommissioning bores		Permitted	<p>Insert after e)</p>	

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			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	
<b>RRMP Rule 5</b> Feedlots and feedpads		<b>Permitted</b>	Insert after (d)  e) The feedpad or feedlot is not located in a Source Protection Zone	
<b>RRMP Rule 6</b> Feedlots and feedpads		<b>Restricted discretionary</b>		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.
<b>RRMP Rule 12</b> Stock feed		<b>Permitted</b>	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.	
<b>RRMP Rule 13</b> Use of compost, biosolids and other soil conditioners		<b>Permitted</b>	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.	
<b>RRMP Rule 14</b> Animal Effluent		<b>Controlled</b>	Insert after g)  h) The activity is not in a source Protection Zone	
<b>RRMP Rule 15</b> Discharge of animal effluent in sensitive catchments	Insert at the end of the list  Or in any Source Protection Zones	<b>Discretionary</b>		
<b>RRMP Rule 16</b> Management of solid waste on production land		<b>Permitted</b>	Insert after k)  l) The activity is not located in a Source Protection Zone	

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<b>RRMP Rule 37</b> New Sewerage systems		<b>Permitted</b>	Insert after r) s) The activity is not located in a Source Protection Zone	
<b>RRMP Rule 40</b> Discharges from Closed landfills		<b>Controlled</b>		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.
<b>RRMP Rule 48</b> Discharges of solid contaminants including cleanfill to land			Insert after h) i) The activity is not located in a Source Protection Zone	
<b>RRMP Rule 49</b> Discharges to land that may enter water		<b>Permitted</b>	Insert after l) m) The activity is not located in a Source Protection Zone	
<b>RRMP Rule 61</b> Transfer of Permits to take and use surface water from a river	The transfer of a permit to take and use water from a river to another site	<b>Controlled</b>	Insert after d) e) The transfer is not in any TANK Freshwater Quantity Management Unit.	
<b>RRMP Rule 62</b> Transfer of Permits to take and use groundwater	The transfer of a permit to take and use groundwater to another site	<b>Controlled</b>	Insert after d) e) The transfer is not in any TANK Freshwater Quantity Management Unit.	
<b>Insert new RRMP Rule 62a</b> Transfer of permits to take and use water	Permanent or temporary transfer of water in accordance with	<b>Controlled</b>	<del>a) (d) The transfer is not part of stream flow maintenance provided by Rule TANK 15</del> b) 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	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 rate of take and any other requirements in relation to any relevant minimum flow or level or allocation limit or

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	5136(2)(b)(i) of the RMA	<p>2. To another person on another site</p> <p>c) The transfer is not between ground and surface water point of take</p> <p>d) The permit is</p> <ul style="list-style-type: none"> <li>(i) within the same catchment to any point downstream (excluding downstream tributaries) of the location to which the permit applies;</li> <li>(ii) for groundwater takes in the Heretaunga Plains FMU (Quantity), the transfer is to any point downstream of any affected stream;* and</li> <li>(iii) the transfer is within the same Freshwater Management Unit (Quantity)</li> </ul> <p>e) 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</p> <p>f) The transfer does not result in an increase in nitrogen loss as specified in Table 2 in Schedule 4</p> <p>g) 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.</p> <p>h) 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*</p> <p>i) The purpose for the water use does not change except</p> <ul style="list-style-type: none"> <li>(i) that water takes for irrigation use may be transferred for irrigation of different crops subject to conditions (e) and (f)</li> <li>(ii) for transfers that enable the operation of a flow enhancement scheme (ref Policy 38)</li> <li>(iii) the transfer enables efficient delivery of water supply to meet the communities' human health needs.</li> </ul>	<p>drawdown effects, including in relation to any Source Protection Zone for a registered drinking water supply.</p> <p>3. Compliance with any applicable minimum flows and levels including flow enhancement in any applicable stream*</p>
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			<p>Advisory Notes</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• 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.</li> </ul> <p><u>Note that TANK 4 or 4a may be triggered as a result of a transfer activity</u></p>	
Insert new rule 62b	Permanent or temporary transfer of water in accordance with S136(2)(b)(i) of the RMA	Discretionary	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))

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Stormwater

RULE	ACTIVITY	STATUS	CONDITIONS/STANDARDS/TERMS	MATTERS
<b>STORMWATER 1</b> <i>New and existing Activities</i>	The diversion and discharge of stormwater into water, or onto land where it may enter water from any new or existing and lawfully established: (a) residential activities; (b) non-industrial or trade premises; (c) industrial or trade premises with less than 1,000 m <sup>2</sup> of impervious areas; (d) rural building. <sup>26</sup>	<b>Permitted</b>	<p>(1) The diversion and discharge shall not:</p> <ul style="list-style-type: none"> <li>(a) cause any permanent bed scouring or bank erosion of land or any water course at or beyond that point of discharge</li> <li>(b) cause or contribute to flooding of any property</li> <li>(c) cause any permanent reduction in the ability of the receiving environment to convey flood flows</li> <li>(d) contain hazardous substances or, be from a site used for the storage, use or transfer of hazardous substances</li> <li>(e) Contains drainage from a stockyard</li> <li>(f) cause to occur or contribute to any of the following after reasonable mixing: <ul style="list-style-type: none"> <li>i) production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials</li> <li>ii) any emission of objectionable odour</li> <li>iii) Any conspicuous change in colour or the visual clarity of the receiving water body (including the runoff from bulk earthworks)</li> <li>iv) any freshwater becoming unsuitable for consumption by farm animals</li> </ul> </li> <li>g) cause to occur or contribute to the destruction or degradation of any habitat, mahinga kai, plant or animal in any water body or coastal water</li> <li>h) cause to occur or contribute to the discharge of microbiological contaminants including sewage, blackwater, greywater or animal effluent.</li> </ul> <p>(2) The property cannot connect to a current or planned reticulated stormwater network.</p>	

<sup>26</sup> NOTE: Refer to Rule 52 in circumstances of any non-compliance with one or more relevant conditions/standards/terms in this rule.

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			<p>(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,</p> <p>(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 Condition 1 will be met or have been met.</p>	
STORMWATER 2	<p>The diversion and discharge of stormwater into water, or onto land where it may enter water from any new or existing and lawfully established;</p> <p>(a) residential activities;</p> <p>(b) non-industrial or trade premise;</p> <p>(c) industrial or trade premise with less than 1,000 m<sup>2</sup> of impervious areas;</p> <p>(d) rural</p>	Restricted Discretionary	<p>a) The diversion and discharge of stormwater does not comply with the conditions of Stormwater Rule 1</p>	<p>a. Location of the point of diversion and discharge including its catchment area.</p> <p>b. Volume, rate, timing and duration of the discharge, in relation to a specified design rainfall event.</p> <p>c. Effects of the activity on downstream flooding.</p> <p>d. Contingency measures in the event of pipe capacity exceedance.</p> <p>e. Actual or likely adverse effects on fisheries, wildlife, habitat or amenity values of any surface water body.</p> <p>f. Actual or likely adverse effects on the potability of any ground water.</p> <p>g. 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.</p> <p>h. The actual or potential effects of the activity on the water quality objectives and limits set out in Schedule 1.</p> <p>i. Duration of the consent.</p> <p>j. A compliance monitoring programme.</p> <p>k. A bond.</p> <p>l. Administrative charges.</p>

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STORMWATER 3	Diversion and discharge of stormwater from an existing or new local authority managed stormwater network into water or onto land where it may enter water. <sup>26</sup>	Controlled	<p>(1) The diversion and discharge shall not:</p> <p>(a) cause any permanent bed scouring or bank erosion of land or any water course at or beyond that point of discharge</p> <p>(b) cause or contribute to flooding of any property</p> <p>(c) cause any permanent reduction in the ability of the receiving environment to convey flood flows</p> <p>(d) contain hazardous substances or, be from a site used for the storage, use or transfer of hazardous substances</p> <p>(e) contain drainage from a stockyard</p> <p>(f) cause to occur or contribute to any of the following after reasonable mixing:</p> <p>i) production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials</p> <p>ii) any emission of objectionable odour</p> <p>iii) Any conspicuous change in colour or the visual clarity of the receiving water body (including the runoff from bulk roadworks)</p> <p>iv) any freshwater becoming unsuitable for consumption by farm animals</p> <p>(g) cause to occur or contribute to the destruction or degradation of any habitat, mahinga kai, plant or animal in any water body or coastal water</p> <p>(h) cause to occur or contribute to the discharge of microbiological contaminants including sewage, blackwater, greywater or animal effluent.</p> <p>(2) An application for resource consent must include an Integrated Catchment Management plan that includes:</p>	<p>1) The efficacy of the Integrated Catchment Management Plan including, but not limited to:</p> <p>a) Its contribution to achieving water quality objectives</p> <p>b) its implementation programme and milestones.</p> <p>c) The comprehensiveness and reliability of the monitoring regime</p> <p>d) The use of low impact stormwater design methods</p> <p>2) Its contribution to the avoidance of adverse effects including cumulative effects, on aquatic ecosystem health and mahinga kai, contact recreation and Māori customary use</p> <p>(3) The characteristics of the proposed discharge and its effects on the receiving environment</p> <p>(4) 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.</p> <p>(5) Duration of the consent</p> <p>(6) Review of consent conditions</p> <p>(7) Compliance monitoring</p> <p>(8) Administrative changes</p>

<sup>25</sup> NOTE: Refer to Rule 92 in circumstances of any non-compliance with one or more relevant conditions/standards/terms in this rule.<sup>26</sup> NOTE: Refer to Rule 92 in circumstances of any non-compliance with one or more relevant conditions/standards/terms in this rule.

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			<p>(i) A monitoring programme to assess existing stormwater discharge quality and level of impact on receiving water quality standards</p> <p>(ii) Identification of the spatial extent of the stormwater network to which the application for consent relates</p> <p>(iii) Identification of the priority streams or catchments where stormwater discharges currently result in receiving water quality below the standards specified in Schedule 1</p> <p>(iv) A programme of mitigation measures including timeframes and milestones for the enhancement of streams identified in (2)(iii)</p> <p>(v) Identification of any industrial or trade sites, that use, store or produce the discharge of any contaminant of concern (as defined in Table 1.1 of Hawke's Bay Waterway Guidelines Industrial Stormwater Design).</p> <p>(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.</p> <p>(vii) For sites identified in (2)(vi), a programme to ensure Urban Site Specific Stormwater Management Plans are prepared and implemented so that stormwater quality risks are managed (Schedule 9)</p> <p>(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.</p> <p>(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.</p>	
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			<p>(xi) Identification of measures to demonstrate how discharges shall not cause scouring or erosion of land or any water course beyond the point of discharge</p> <p>(xii) 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 persons and communities from the drinking water supply</p> <p>(xiii) Description of measures to demonstrate how the discharge shall not contain hazardous substances<sup>17</sup> or contaminants (including wastewater) and shall not cause any of the following to occur<sup>18</sup>:</p> <p>(i) production of conspicuous oil or grease films, scums or foams or floatable or suspended materials after reasonable mixing</p> <p>(ii) any emission of objectionable odour after reasonable mixing</p> <p>(iii) Any conspicuous change in colour or visual clarity of the receiving water after reasonable mixing</p> <p>(iv) Any freshwater becoming unsuitable for consumption by farm animals after reasonable mixing</p> <p>(v) the destruction or degradation of any habitat, mātanga kai, plant or animal in any water body or coastal water.</p>	
STORMWATER 4	Discharge of stormwater to water or onto land where it	<b>Restricted discretionary</b>	(a) An application for resource consent must include an Urban Site Specific Stormwater Management Plan (Schedule 9)	(1). The efficacy of the Urban Site Specific Stormwater Management Plan (Schedule 9 including measures

<sup>17</sup> As defined in the Hazardous Substances and New Organisms Act 1996<sup>18</sup> As defined at definition 9.7 in the Glossary of the Hawke's Bay Regional Resource Plan

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	may enter water from any industrial or trade premises. <sup>19</sup>		<p>(b) The diversion and discharge:</p> <p>(i) shall not cause permanent bed scouring or bank erosion of land or alter the natural course of any water body</p> <p>(ii) shall not cause or contribute to flooding of any property.</p> <p>(iii) shall not cause any permanent reduction in the ability of the receiving environment to convey flood flows</p> <p>(iv) shall not contain hazardous substances</p> <p>(c) The diversion and discharge shall not cause any of the following to occur after reasonable mixing:<sup>20</sup></p> <p>(i) production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials</p> <p>(ii) any emission of objectionable odour</p> <p>(iii) Any conspicuous change in colour or the visual clarity</p> <p>(iv) result in any freshwater becoming unsuitable for consumption by farm animals</p> <p>(d) the diversion and discharge shall not cause or contribute to:</p> <p>(i) the destruction or degradation of any habitat, mahinga kai, plan or animal in any water body or coastal water</p> <p>(ii) the discharge of microbiological contaminants, including sewage, blackwater, greywater or animal effluent.</p> <p>(e) There is no reticulated stormwater network at the property boundary</p> <p>(f) 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.</p>	<p>adopted to minimise the risk of contaminants of concern entering stormwater including:</p> <p>(i) Installation of stormwater management devices including as detailed in table 3.1 of the Hawke's Bay Regional Council Industrial Stormwater Watenway Design Guidelines.</p> <p>(ii) Alignment with relevant industry guidelines and best practice standards.</p> <p>(2) Water quality standards in the discharge in relation to any contaminants being used on site and specific methods for treating these.</p> <p>(3) 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.</p> <p>(4) The characteristics of the proposed discharge and its effects on the receiving environment</p> <p>(5) Duration of the consent</p> <p>(6) Review of consent conditions</p> <p>(7) Compliance monitoring</p>
STORMWATER 5	The diversion and discharge of stormwater into	Discretionary		The Council may at any time, by written notice to the owner or occupier (following a reasonable period of consultation), review a consent in light of new

<sup>19</sup> NOTE: Refer to Rule 52 in circumstances of any non-compliance with one or more relevant conditions/standards/terms in this rule.<sup>20</sup> As defined in definition 2.7 of the Glossary of the Hawke's Bay Regional Resource Plan

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	<del>water, or onto land where it may enter water.</del>		<del>information that has become available or any change in circumstances that has occurred, and vary any condition of consent as a consequence.</del>
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SCHEDULE 1: FRESHWATER QUALITY OBJECTIVES

Schedule 1 is linked to objectives seeking that water quality will meet the needs of the values identified and to Objective 4 which provides the timeframe within which water quality must be improved. The water quality states specified in this Schedule will enable environmental, cultural and social needs for water quality to be met when they are achieved. Schedule 1 is a first step with objectives being attained by 2040. The longer term and more integrated (fresh/coastal water) approach to managing water resources is reflected in Schedule 2.

Water quality attribute	Surface WQ areas <sup>1</sup>	Water Quality Objective or /Target <sup>1</sup>	Application	Critical Value <sup>1</sup>	Also relevant for
Water clarity (m)	Upper Ngaruroro and Upper Tūtaekuri Rivers	≥ 5 m	Median, <median flows	Trout fishery - outstanding	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
	Lower Ngaruroro and Lower Tūtaekuri Rivers	≥ 3.75 m		Trout fishery - significant	
	Ngaruroro and Tūtaekuri Tributaries	≥ 3.75 m			
	Lowland tributaries	≥ 1.6 m	Median, all flows	Recreation / aesthetics	
Turbidity (NTU)	Upper Ngaruroro and	≤ 0.7	Median, at < median flows	trout fishery	Recreation, ecosystem health, UU, ecosystem health, kaitiakitanga, waimaori, natural character, mauri, domestic and farm water supply

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	Lower Tūtaekurī Rivers				
	Lower Ngaruroro and Lower Tūtaekurī Rivers	≤ 4.1	Median, all flows	statistical GL	UU, ecosystem health, kaitiakitanga, waimaori, natural character, mauri, abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use.
	Ngaruroro and Tūtaekurī Tributaries	≤ 4.1			
	Lowland tributaries	≤ 5.6			
Deposited sediment (%)	Upper Ngaruroro and Upper Tūtaekurī Rivers	< 20% / < 15% (May-Oct)	Run habitats, maximum	Ecosystem health Biodiversity (MCI), salmonid spawning	Uu, waimaori, natural character, mauri, ecosystem health, kaitiakitanga- ahu whenua mahinga kai, he aha haere, taonga/tohu species habitat and spawning, cultural practices, wetlands and lakes, maori land, marae/hapū, indigenous biodiversity
	Lower Ngaruroro and Lower Tūtaekurī Rivers	< 20 %		Ecosystem health (Biodiversity (MCI))	
	Ngaruroro and Tūtaekurī Tributaries	< 20 %			
	Lowland tributaries	< 20 %			

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Periphyton biomass (mg/m <sup>2</sup> ) <sup>4</sup>	Lower Ngaruroro and Upper Tūtaekurī Rivers	>50 - <120 mg/m <sup>2</sup> max 1 p.a.	max 8% exceedance over 3 years monthly observations	Ecosystem health (NOF)	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, indigenous biodiversity
Periphyton cover (annual max, %PeriWCC)	Upper Ngaruroro and Upper Tūtaekurī Rivers	≤ 20 %	Monthly observations, all year.	Ecosystem health	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, indigenous biodiversity abstractive uses including stock drinking
Periphyton cover (seasonal max, %PeriWCC)	Lower Ngaruroro and Lower Tūtaekurī Rivers	≤ 30 %	Monthly observations, all year (for Uu)	Recreation	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
	Ngaruroro and Tūtaekurī Tributaries	≤ 30 %			
Cyanobacteria (benthic cover %) <sup>5</sup>	All Management Areas	< 20 %	Monthly observations, all year.	Recreation	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

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Macrophytes (max %CAV)	Lowland tributaries	≤ 50 %	Monthly observations, all year.	Ecosystem health	Uu, waimaori, natural character, mauri, ecosystem health, kaitiakitanga, he aha haere, 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
MCI (index)	Upper Ngaruroro and Upper Tūtaekurī Rivers	≥ 120	average, flow < median	Ecosystem health	Waimaori, natural character, mauri, ecosystem health, kaitiakitanga, whakapapa, taonga/tohu species habitat and spawning, Indigenous biodiversity, trout
	Lower Ngaruroro and Lower Tūtaekurī Rivers	≥ 100			
	Ngaruroro and Tūtaekurī Tributaries	≥ 100			
	Lowland Tributaries (sb-MCI)	≥ 90			
DIN (mg/L)	Upper Ngaruroro and Upper Tūtaekurī Rivers	< 0.05 mg/L	Median, all flows	Algal growth	Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, ecosystem health, abstractive uses, drinking water

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	Lower Ngaruroro and Lower Tūtaekurī Rivers	< 0.15 mg/L	Median, all flows	Estuary ecosystem health	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
	Ngaruroro and Tūtaekurī Tributaries	< 0.3 mg/L			Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, abstractive uses, drinking water
	Lowland tributaries	< 0.444 mg/L			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, industrial and commercial use
DRP (mg/L)	Upper Ngaruroro and Upper Tūtaekurī Rivers	< 0.003 mg/L	Median, all flows	Algal growth	Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, abstractive uses
	Lower Ngaruroro and Lower Tūtaekurī Rivers	< 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
	Ngaruroro and Tūtaekurī Tributaries	< 0.015 mg/L		Algal growth	Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, abstractive uses
	Lowland tributaries	< 0.015 mg/L		Estuary ecosystem health	Uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, ecosystem health, abstractive uses

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Nitrate (mg NO <sub>3</sub> -N/L)	Upper Ngaruroro and Upper Tūtaekurī Rivers	median ≤ 1 / 95th%ile ≤ 1.5	annual median, annual 95th%ile (Hazen method), all flows	Toxicity (NOF)	Waimaori, mauri, aquifer recharge, indigenous taonga/tohu species habitat and spawning, ahu moana Abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use
	Lower Ngaruroro and Lower Tūtaekurī Rivers				
	Ngaruroro and Tūtaekurī Tributaries				
	Lowland Streams	median ≤ 2.4 / 95th%ile ≤ 3.5			
Ammonia (mg NH <sub>4</sub> -N/L)	Upper Ngaruroro and Upper Tūtaekurī Rivers	median ≤ 0.03 / max ≤ 0.05	Annual median, annual max unionised ammonia based on pH8 at 20°, all flows	Toxicity (NOF)	Waimaori, mauri, aquifer recharge, indigenous taonga/tohu species habitat and spawning, ahu moana Abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use
	Lower Ngaruroro and Lower Tūtaekurī Rivers				
	Ngaruroro and Tūtaekurī Tributaries				

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E. coli (cfu/100 ml)	Upper Ngaruroro and Upper Tūtaekurī Rivers	<5% over 260/100ml median < 130/100ml	All year, all flows	recreation / human health, Uu	Waimaori, mauri, kaitiakitanga, he aha haere, aquifer recharge, ahu moana, ahūwhenua mahinga kai, nohoanga, cultural practices, tauranga waka, maori land, marae/hapū connections, abstractive uses including for domestic, farm and community water supply, primary production and food production, industrial and commercial use	
	Lower Ngaruroro and Lower Tūtaekurī Rivers	<5% over 540/100ml <20% over 260/100ml median < 130/100ml				
	Ngaruroro and Tūtaekurī Tributaries	<5% over 540/100ml <20% over 260/100ml median < 130/100ml				
	Lowland tributaries	<5% over 1000/100ml median < 130/100ml <30% over 260/100ml <10% over 540/100ml				
Dissolved oxygen (mg/L or %) from continuous data	Upper Ngaruroro and Upper Tūtaekurī Rivers	≥8 (7-d mean min) / ≥7.5 (1-d min) / (≥80% saturation)	7-day mean min; 1-day min (Nov- April)	Ecosystem health	Waimaori, natural character, mauri, kaitiakitanga, whakapapa, indigenous taonga/tohu species, indigenous biodiversity, trout	Deleted: <1
	Lower Ngaruroro and Lower					

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	Tūtaekurī Rivers				
	Ngaruroro and Tūtaekurī Tributaries				
	Lowland tributaries	≥5 (7-d mean min) / ≥4 (1-d min)			Waimaori, natural character, mauri, kaitiakitanga, whakapapa, indigenous taonga/tohu species, indigenous biodiversity
Temperature (°C) 5-day CRI from continuous data <sup>9</sup>	Upper Ngaruroro and Upper Tūtaekurī Rivers	≤ 1°C increment compared to reference state	Cox-Rutherford-Index from continuous measurements, hottest 5 consecutive days, all flows	Ecosystem health	Waimaori, natural character, mauri, kaitiakitanga, whakapapa, taonga/tohu species, ahumoana, ahuwhehenua mahinga kai indigenous biodiversity, trout
	Lower Ngaruroro and Lower Tūtaekurī Rivers	≤ 2°C increment compared to reference state			
	Ngaruroro and Tūtaekurī Tributaries	≤ 2°C increment compared to reference state			
	Lowland tributaries	≤ 2°C <sup>9</sup> increment compared to reference state			Waimaori, natural character, mauri, kaitiakitanga, whakapapa, taonga/tohu species, ahumoana, ahuwhehenua mahinga kai Indigenous biodiversity
pH	Upper Ngaruroro and Tūtaekurī	6.5 – 8.	At all times, 95 <sup>th</sup> %ile	Ecosystem health	

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	All areas (not upper Ngaruroro and Tūtaekuri)	6.5- 8.5		Ecosystem health	
BOD (ScBOD <sub>5</sub> ) <sup>10</sup>	All areas	<2 mg/l	Flow <median	Ecosystem health	
Heavy metals and metalloids, pesticides and organic contaminants, radioactive contaminants <sup>10</sup>	Upper Ngaruroro and Upper Tūtaekuri Rivers	99% species protection	At all times	Ecosystem Health	
	All areas (not upper Ngaruroro and Tūtaekuri)	95% species protection	At all times	Ecosystem Health	
Guideline value for any aesthetic determinand (Drinking Water Standards for New Zealand DWSNZ) <sup>7</sup>	Groundwater quality all areas <sup>8</sup>	Within guidelines specified in the NZ Drinking Water Standards	At all times	Human Health	
<i>E. coli</i> (maximum concentration per 100mls)	Groundwater quality all areas <sup>8</sup>	<1 <i>E.coli</i> /100ml	At all times	Human Health	
Nitrate- nitrogen (concentration of	Groundwater quality all areas <sup>8</sup>	<1mg/l	At all times	Ecosystem Health	

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nitrate-nitrogen (mg N-NO <sub>3</sub> /l) <sup>6</sup>					
All other determinants Standards for New Zealand DWSNZ)	Groundwater quality all areas <sup>8</sup>	Guideline value for determinant (Drinking Water Standards for New Zealand DWSNZ)	At all times	Human Health	
Placeholder for mātauranga Māori attributes that are yet to be developed					
<p>*the areas that these water quality objectives refer to are on the attached planning maps</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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</p> <p>Note 5; MfE Alert-level framework: New Zealand guidelines for cyanobacteria in recreational fresh waters: Interim guidelines (2009)</p> <p>Note 6; Maximum 95th percentile concentration of nitrate-nitrogen (mg N-NO<sub>3</sub> /l) shall be calculated as the 95th percentile of monitoring results obtained over a period of 5 consecutive years</p> <p>Note 7; Some aesthetic determinants including iron, manganese and hardness are affected by geological conditions and will affect natural water quality</p> <p>Note 8; the attributes are as measured in groundwater at 10m below ground level</p> <p>Note 9; subject to development of reference condition temperatures</p> <p>Note 10; Attribute state established to guide assessment of applications for contaminant discharges</p>					

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## 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

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

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Temperature (°C) 5-day CRI from continuous data	Upper Ngaruroro and Upper Tūtaekuri Rivers	≤ 22°C (A band)	Ecosystem health	≤1°C increment compared to reference condition	Cox-Rutherford-Index from continuous measurements, hottest 5 consecutive days, all flows
	Lower Ngaruroro and Lower Tūtaekuri Rivers	≤ 23°C (B band)		≤2°C increment compared to reference condition (needs further investigation)	
	Ngaruroro and Tūtaekuri Tributaries, Lowland tributaries	≤ 23°C (B band)		(needs further investigation)	

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Table 1 Estuary Water and Ecosystem Attributes

Water quality attribute	Estuary	Water Quality Objective	Critical Value	Application
Water column dissolved oxygen	Ahuriri	7 day mean ≥7.0mg/L	Ecosystem health Kaitiakitanga	Continuous logger in most susceptible areas of estuary. Summer monitoring data for discrete specified periods. All 3 statistics must be met for each band
		7 day minimum ≥6.0mg/L		
		1 day minimum ≥5.0mg/L		
	Waitangi	7 day mean ≥7.0mg/L		
		7 day minimum ≥6.0mg/L		
		1 day minimum ≥5.0mg/L		
Escherichia coli/Enterococci	Ahuriri	Microbiological Assessment Category B	Recreation	Microbiological Assessment Category as outlined in

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	Waitangi	Assessed at freshwater sites upstream of the estuary using criteria outlined in Schedule 1	Kaitiakitanga Mahinga kai	Microbiological water quality guidelines for marine and freshwater recreational areas
Water column temperature	Ahuriri and Waitangi	The water temperature shall not be greater than 3°C compared to a reference site	Ecosystem health Kaitiakitanga	Continuous monitoring or summer maxima
pH	Ahuriri and Waitangi	7.0 < pH < 8.5	Ecosystem health Kaitiakitanga	Preferably use continuous measurements for pH, however in the absence of continuous measurements daily summer maxima can be used
Nitrate toxicity	Ahuriri and Waitangi	Annual Median 2.4mg/L; and 95th%ile < 3.5mg/L	Ecosystem health Kaitiakitanga	Annual median, annual 95th%ile (Hazen method).
Ammonia toxicity	Ahuriri and Waitangi	0.46 mg/L	Ecosystem health Kaitiakitanga	Annual maximum within a 12 month period when corrected for pH and temperature
Toxicants in water	Ahuriri and Waitangi	Should not exceed the 95% level of protection detailed in ANZG, 2018	Ecosystem health Kaitiakitanga Mahinga kai	Annual median

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Nitrogen and Phosphorous in water column	Ahuriri and Waitangi	Trigger levels. Annual median $\leq$ : - 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	Annual median of no less than 8 samples within a 12 month period.
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 grain size. Wet sieving (7 class), no pre-treatment.

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Toxicants in sediments	Ahuriri and Waitangi	Should not exceed the 95% level of protection detailed in ANZG, 2018	Ecosystem health Kaitiakitanga Mahinga Kai	Annual median of site replicates at Estuarine Ecological Monitoring sites
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)				

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### 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/km<sup>2</sup>/year (as modelled by SedNet)
2. SOE monitoring shows the freshwater objectives for nitrogen 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;

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

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).

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#### 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 hectares per property, 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

Calculation of changes to the annual nitrogen loss on a whole of property or whole of farming enterprise basis 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 value given is the maximum difference between the highest and lowest Nitrogen loss x 10ha.

Where the land use activity involves arable or vegetable cropping including grazing on a rotational basis, including on lease land at variable locations, production land use change does not include a change in the location of an arable and/or vegetable cropping rotation, where the area of the rotation is equivalent, (plus 10% /10 ha) of the maximum rotation area in the 5 years prior to the plan notification

TABLE 1; NITROGEN LOSSES FOR PRODUCTION LAND

Land Use Type	TN Load (kg/ha/y) (Overseer)	TN Load (kg/ha/y) SPASMO		
		<i>Eck/Omahu/Pakipaki Soils</i>	<i>Average Other soils</i>	<i>Farndon/Omarunui/Te Awa soils</i>
Beef	20			
Dairy	32			
Scrub or tree cover	3			
Mixed sheep, beef and deer	13			
Kiwifruit		9	13	23
Pipfruit		9	15	24
Summer fruit		9	14	23
Grapes		1	9	18
*		*	*	*
*		*	*	*
*		*	*	*
*		*	*	*
*		*	*	*
Winter forage crops				
<u>Arable/vegetable rotation</u>				

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Deleted: Peas and beans

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

		Annual Nitrogen loss change threshold (kg/y)		
		<i>Eck/Omahu/Pakipaki Soil types</i>	<i>Other soils</i>	<i>Farndon/Omarunui/Te Awa soil types</i>
Unirrigated land uses	290			
Irrigated land uses		80	240	430

Change between non-irrigated and irrigated land uses will be subject to a maximum permitted change of 290 (kg/y) using SPASMO to calculate the change.

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## 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 their operation 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 <sup>(5)</sup>
- 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 <sup>21</sup>programmes, and will in addition need to address local water quality and quantity issues.

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

Any TANK Programme prepared in accordance with Schedule 5 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. . These

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<sup>21</sup> This refers to existing industry programmes such as Hort NZ GAP, Sustainable Winegrowing, Fonterra Clean Stream etc.

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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

:

#### 1. Governance and Management

**1.1** Each Catchment Collective or Industry Group must undertake to carry out the requirements of Sections A and B and must specify in writing the manner in which it will carry this out. This must address the following:

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

- a) 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
- b) 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 clause 2 below.
- c) 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;**

- d) Competent and consistent performance in meeting the requirements of this schedule
- e) Robust data management, including up-to-date registers of Programme Members.
- f) Timely provision of suitable quality data and information required under the following clauses to Hawke's Bay Regional Council
- g) Conditions of membership of the Programme by individual land managers (the 'Members') who commit to the Programme including provision of information to enable reporting requirements to be met.

**A description of the Programme area including**

- h) locations and maps,
- i) land uses,
- j) locations of;
  - (i) drains (including subsurface drains), streams, rivers, wetlands and other water bodies,

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- (ii) any Source Protection Zone or Extent 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 Extent for any Registered Drinking Water Supplies. Contact information for the supply manager is available on the Council website),

k) activities at particular risk of nutrient loss,

l) property boundaries,

m) up-to-date details about ownership and property managers,

n) up-to-date 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

### 2. Environmental Outcomes

#### 2.1 The Plan must include statements about the:

- specified water quality outcomes in Schedule 1 of this Plan relevant to the location of Members' properties
- measures or practices needed to minimise and mitigating the cumulative environmental effects of land use that will enable the specified water quality objectives to be met,
- 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

#### 2.2 The Plan must address, where appropriate;

- managing contaminant losses (especially sediment, nutrients and bacteria) to waterways including efficient use of nutrients and good practice when carrying out land disturbance activities especially in relation to critical contaminant source areas
- where water quality does not meet standards in Schedule 1, identifying how there will be reductions in losses that contribute to meeting the specified water quality including, where appropriate, reference to:
  - in relation to industry specified benchmarks or good practice for nitrogen and phosphorus loss;
  - LUC (Land Use Capability) and soil type;
  - Olsen P levels in soil;
  - Stock management including rates and densities of different classes of stock;
  - Application of fertilisers;
  - Application of collected animal effluent;
  - Cultivation, soil disturbance or vegetation clearance activities
- Management of riparian margins, including to meet the outcomes specified in Policy 9 maintaining or improving the physical and biological condition of soils in a manner

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consistent with Policy 18 and RRMP Rule 7) in order to avoid, remedy or mitigate problems arising from:

- (ii) Loss of topsoil by wind or water erosion;
- (iii) Movement of soils and contaminants into waterways;
- (iii) Damage to soil structure and health;
- (iv) Mass movements of soil;

- d) wetland management including to meet the outcomes specified in Policies 12 and 13;
- e) management of animal effluent to avoid contamination of ground and surface waters;
- f) measures required to reduce risk of contamination of the source water for any Registered Drinking Water Supply<sup>22</sup>;
- g) management of stock, including in relation to river or stream crossings and exclusion from waterways in a manner that is consistent with Policy 20 and TANK Rule 1 or 3;
- h) in the Karamu and Lake Poukawa Catchments, 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.

2.3 The Plan must include measure to address Nutrient Management 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, including:

- a) development of an inventory of the nitrogen loss rate (kg/ha/year) for every property 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;
- b) a description of any mitigation measures identified as necessary to meet water quality objectives on those properties or within the relevant catchment;
- c) annual recording and reporting of nutrient input and export data, including annual nitrogen loss rates.

2.4 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

### 3. Approval

3.1 The Catchment Collective plan or Industry Programme will be submitted for approval by the HBRC no later than 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:

- a) whether the requirements of this Schedule are met
- b) whether the programme is consistent with the policies, water quality objectives and milestones that are relevant for that Catchment Collective or Industry Programme
- c) 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

<sup>22</sup> 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.

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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.<sup>¶</sup>

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- d) ~~whether the governance and management systems are in place to enable the implementation of the programme~~

3.2 ~~Where approval is not given, the requirements of Rule TANK 1 are not able to be met and land uses in the catchment subject to either Rule TANK 1 (b)2 or Rule TANK 2~~

#### 4. Information Requirements

4.1 The Catchment Collective or Industry programme must prepare a statement of the data and information that will be collected in order to monitor implementation and report to Council.

4.2 ~~Information will be required where appropriate about:~~

- a) ~~changes to programme area and membership;~~
- b) ~~nature and significance of any land use change in accordance with Policy 19 and based on land uses <at the date of plan notification>;~~
- c) ~~the results of any environmental monitoring carried out by the Catchment Collective or Industry Programme;~~
- d) ~~the mitigation measures or practices carried out to reduce contaminant loss (consistent with what is industry agreed good practice) that will be adopted by the property owners or managers and as detailed in section 2.1;~~
- e) ~~data, which may be aggregated across a catchment, about nitrogen loss and any changes in losses in respect of section 2.3.~~

#### 5. Reporting and Review

5.1 A summary report on the implementation of the Programme shall be submitted ~~annually~~ to the Hawke's Bay Regional Council ~~or less frequently as determined by Council if all agreed mitigations have been completed, water quality objectives are being met and there is no land use change exceeding 10% of the programme area.~~

5.2 ~~The report will be supplied in the format specified by Council.~~

5.3 ~~The report will include:~~

- a) ~~information collected under section 4;~~
- b) ~~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);~~
- c) ~~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 of programme objectives, including identification of additional information/support from HBRC that would assist in the achievement of the objectives of the programme.~~

5.4 ~~Every 5 years the annual report shall provide information about:~~

- a) ~~adoption of any new mitigation or good practice measures identified by industry;~~
- b) ~~identification of opportunities for improvements to the programme including, where necessary, amending performance standards, and in relation to nutrient management in clause 2.3.~~

#### 6 Auditing

6.1 The HBRC will;

#### Moved up [3]: Nutrient Management ¶

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; ¶  
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; ¶  
a description of any mitigation measures identified as necessary to meet water quality objectives on those properties or within the relevant catchment. ¶  
annual recording and reporting of nutrient input and export data, including annual nitrogen loss rates.

#### Moved up [4]: 7. Approval¶

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; ¶  
whether the requirements of this Schedule are met ¶  
whether the programme is consistent with the policies, water quality objectives and milestones that are relevant for that Catchment Collective or Industry Programme ¶  
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 ¶  
whether the governance and management systems are in place to enable the implementation of the programme ¶

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- a) Publicly report on the implementation of TANK Programmes;
- b) Undertake 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.

*Note 2: that if the conditions of any applicable rules for specific activities are not being specifically complied with by a landowner or manager, there must be information in Section 2 of this 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: Farm Environment Plans

If a property is not subject to a TANK Industry Programme or a TANK Catchment Collective prepared under Section B of this schedule a Farm Environment Plan must be prepared in accordance with Section C

#### 1. Requirements for Farm Environment Plans.

##### 1.1 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:
    - i. areas at risk of sediment loss;
    - ii. the location of drains (including subsurface drains), streams, rivers, wetlands and other water bodies;
    - iii. the location of any Source Protection Zone or Extent 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 Extents for any Registered Drinking Water Supplies. Contact information for the supply manager is available on the Council website.*);
    - iv. activities at particular risk of nutrient loss;
    - v. contaminant discharge activities.
- d) meet the requirements of Clauses 2 and 4 Section B of this Schedule as applicable for the property, its location and the land use activities being carried out.

#### 2. Reporting and Review

2.1 The Farm Environment Plan will be submitted to the HBRC no later than by the end of the relevant year specified in Schedule 3 for the catchment(s) the property is located in.

2.2 The report will be in the format specified by Council.

2.3 The report will include:

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- a) information collected under section 4
- b) 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)

2.4 Every 5 years the annual report shall provide information about:

- c) adoption of any new mitigation or good practice measures identified by industry,
- d) identification of opportunities for improvements to the programme including, where necessary, amending performance standards, and in relation to nutrient management in clause 2.3

### 3. Auditing

3.1 The HBRC will;

- (i) Publicly report on the implementation of TANK Farm Environment Plan requirements
- (ii) Undertake 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.

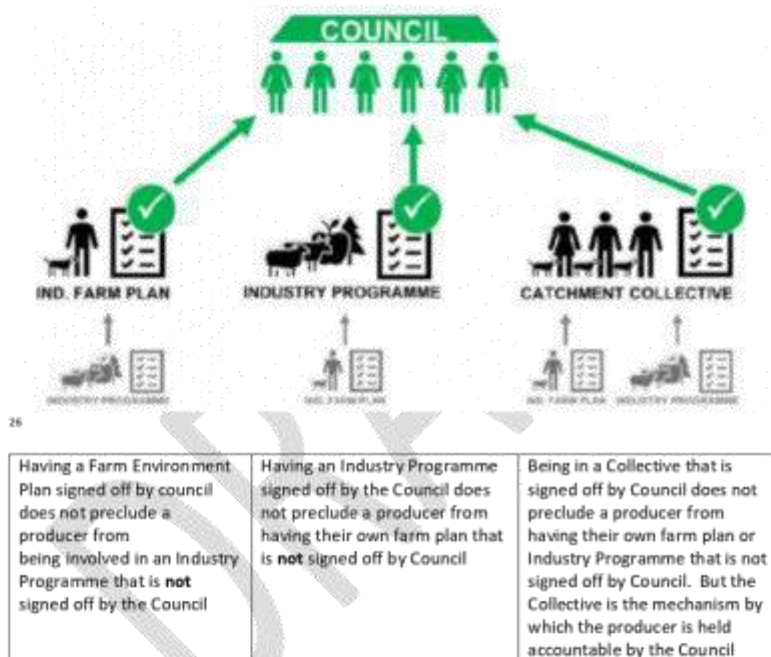
*Note 2: that if the conditions of any applicable rules for specific activities in section 6 of this plan are not being specifically complied with, there is information in the farm Environment Plan to show how the relevant contaminant loss risks are to be managed to a similar level of performance.*

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**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.)



<sup>28</sup> Diagram is from TANK plan change: Barriers and risks to the adoption of proposed mechanisms to co-ordinate management action June 2018. Report by: Justin Connolly Director, Deliberate

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## SCHEDULE 6: FLOWS, LEVELS AND ALLOCATION LIMITS

### ***Minimum and Trigger Flows and Allocation Limits***

This Schedule specifies the amount of water that may be authorised for abstraction from the specified water management units and the flows at which water abstraction is subject to restrictions or requirements. The allocation limits do not apply to water abstraction that is enabled by the release of water from water taken at times of high flow and stored for later release

Water Management Units (quantity) and includes any tributaries of the named river	Water bodies	Minimum flow/flow enhancement site	Minimum Flow (litres/sec and)	Flow enhancement Trigger	Allocation limit (litres/second for surface water and M <sup>3</sup> /week for groundwater
Ahuriri	All surface water	n/a	n/a	n/a	Existing use only <sup>1</sup>
	All groundwater	n/a	n/a	n/a	Existing use only <sup>2</sup>
Karamu/Clive River	Awanui	The Flume	120	120	Total not to exceed 30
	Kawerawera/ Paritua	Turamoe Rd		75	
	Ongeru	Wenley Rd		5	
	Irongate	Clarks Weir	100	100	
	Louisa Stream	Te Aute Rd	30	30	
	Te Waikaha Stream	Muntiny Rd	25	26	
	Mangateretere Stream	Napier Rd	100	100	
	Karamu River	Floodgates	1100	1100	
	Raupare Stream	Ormond Rd	300	300	70
	Lake Poukawa Surface water	n/a	n/a	n/a	Existing use only <sup>1</sup>
	Lake Poukawa Groundwater	At Douglas Rd	20	n/a	Existing use only <sup>2</sup>
Ngaruroto River s/w and g/w	Maraekakaho River	Taits Rd	109	n/a	36
	Tūtaekuni - Waimate	Goods Bridge	1200	n/a	607
	Ngaruroto River (surface and Zone 1)	Fernhill	2400		1300
		Chesterhope	?		
	Ngaruroto Groundwater	N/a	n/a	n/a	Existing use only <sup>2</sup>
Tūtaekuni River s/w and g/w	Mangatutu Stream	Puketapu	3800 <sup>27</sup>		120
	Mangaone River	Puketapu	2500		140
	Tūtaekuni (surface plus Zone 1)	Puketapu	2500		1140
	Tūtaekuni groundwater	n/a	n/a		Existing use only <sup>2</sup>

<sup>27</sup> reflects existing consents

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Item 6

Attachment 1

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Heretaunga Plains Water Management Unit (Quantity)	Heretaunga Plains groundwater	n/a	n/a		(Interim limit 90Mm <sup>3</sup> per year) Existing use only
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## SCHEDULE 7: HIGH FLOW ALLOCATION

Table: High Flow Allocation Limits and Triggers

(A) RIVER NAME	(B) FLOW MANAGEMENT SITE	(C) FLOW TRIGGER	(D) HIGH FLOW ALLOCATION	(E) AMOUNT RESERVED FOR Māori DEVELOPMENT	(F) LIMITS FOR DAMMING
Ngaruroro R	Fernhill	20 m <sup>3</sup> /sec	8,000 litres per second* This includes; <ul style="list-style-type: none"> <li>the 2 m<sup>3</sup>/sec allocation allocated in consents existing at &lt;date of notification&gt;</li> <li>the amount taken from high flow in any tributary of the Ngaruroro</li> <li>the amount specified in column (E)</li> </ul>	1,600 litres per second	Deleted: n/a
		All Trigger flows above 5000 l/sec	Abstraction of up to 1 m <sup>3</sup> /sec authorised in consents existing as at <date of notification> Included in the 1m <sup>3</sup> /sec is abstraction of up to 400l/sec which is solely available to be discharged into the Paritua Stream to provide for stream enhancement		n/a
		Trigger flows above 2400l/sec	200 l/sec which is solely available to be discharged into the Paritua Stream to provide for stream enhancement		
Ngaruroro and Tūtaekuri Tributaries		Median flow	The high flow allocation from the tributary is proportional to its contribution to the mainstem. It is part of the total allocation for the mainstem high flow allocation.	20% of any high flow allocation from any tributary.	No change of more than 10% to FREs in the mainstem of the applicable River. Deleted: 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.
Tūtaekuri	Puketapu	8,000 litres per second	2,500 litres per second This includes <ul style="list-style-type: none"> <li>the amount taken from high flow in any tributary of the Tūtaekuri</li> <li>the amount specified in column (E)</li> </ul>	500 litres per second	Deleted: n/a

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## 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.

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

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## 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.

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**SCHEDULE 10: SOURCE PROTECTION FOR DRINKING WATER SUPPLIES**

The location and details of groundwater wells (including water infiltration galleries) and surface water intakes used as the source of a Registered Drinking Water Supply can be found on the Registered Drinking Water Supply Protection Zone map layers on the HBRC online GIS mapping website.

**Source Protection Zones**

Existing Registered Drinking Water Supplies that provide drinking water to no fewer than 501 people for not less than 60 days per year will have provisional Source Protection Zones determined according to the provisions of Table 1 until the relevant resource consent requires replacement or until an application for resource consent to amend a Source Protection Zone is made.

**Table 1: Method for calculating provisional SPZ**

Registered Drinking Water supply	Method for calculating SPZ
Hastings District Council Municipal Supply	Neekes Bay Regional Council Heretaunga Plains Groundwater Model
Napier City Council Municipal Supply	Analytical Element Model meeting criterion head criterion

Where the holder of a water permit for an existing Registered Drinking Water Supply considers the Source Protection Zone is not adequate for the level of protection required for that supply or where new information significantly amends the modelling output, an application may be made to amend the resource consent conditions of the water permit and establish an amended Source Protection Zone.

The dimensions of a Source Protection Zone shall form part of any application for resource consent to take or use water for a new Registered Drinking Water Supply or the replacement of an existing permit for that purpose.

The location of a Source Protection Zone around a Registered Drinking Water Supply site to be determined using site specific information listed in Table 2 below and according to the minimum requirements for the relevant population in Table 3.

**Table 2: Site Specific information**

Site Specific information
1. the topography, geography and geology of the site;
2. the depth of the well;
3. the specifications of the well;
4. pumping rates;
5. the type of aquifer;
6. the rate of flow in the surface waterbody;
7. the types of actual or potential contaminants;
8. the level of treatment that the abstracted water will receive;
9. any potential risk to water quality

**Table 3: Methodology for Determining Source Protection**

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**F. PHYSICAL PLANT** ☐ N/A (Skip to part F)

F1. Building: Approximate age: \_\_\_\_\_ yes: 1  
Evidence that maintenance results in discharge to a

F2. Roofing Material: \_\_\_\_\_ Condition of roof: \_\_\_\_\_

F3. Parking Lot: Approximate age: \_\_\_\_\_ yes: 1  
Surface material: ☐ Paved Concrete ☐ Gravel

F4. Do downspouts discharge to impervious surface  
Are downspouts directly connected to storm drains

F5. Evidence of poor cleaning practices for concrete  
Tall

F6. Evidence of poor cleaning practices for washing  
Tall

**G. TURF/LANDSCAPING AREAS** ☐ N/A (Skip to part F)

G1. % of site with Forest canopy: \_\_\_\_\_ % Turf grass

G2. Rate the turf management status: ☐ High ☐ High

G3. Evidence of permanent irrigation or "non-turf" grass

G4. Do landscaped areas drain to the storm drain system

G5. Do landscape plants accumulate organic matter (leaves)

**H. STORM WATER INFRASTRUCTURE** ☐ N/A

H1. Are storm water treatment practices present? ☐ Y ☐ N

H2. Are there maintenance records? ☐ Y ☐ N

H3. Are private storm drains located at the facility?

Is litter, sediment and/or organic material present in  
H4. Is stormwater connected to sewer? ☐ Y ☐ N

**I. INITIAL HOTSPOT STATUS - INDEX RESULT**

☐ Not a hotspot (fewer than 5 circles and no boxes)

☐ Confirmed hotspot (10 to 15 circles and/or 1 box)

\*Index: ☐ denotes potential pollution source.

Adapted from the Hotspot Site Investig

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Population served class	Microbial Treatment?	Wells Artesian Head condition	Method	Uncertainty assessment approach
25 – 100	Yes	Yes or No	Manual	None
	No	Yes	Manual	None
	No	No	Manual	Sensitivity analysis
100-500	Yes	Yes	Manual	None
	Yes	No	Manual	Sensitivity analysis
	No	Yes	Manual	Sensitivity analysis
	No	No	Analytical Element Model	Sensitivity analysis
500-5,000	Yes	Yes	Manual	Sensitivity analysis
	Yes	No	Analytical Element Model	Sensitivity analysis
	No	Yes	Analytical Element Model	Sensitivity analysis
	No	No	Analytical Element Model	Stochastic Uncertainty Analysis
≥5000	Yes	Yes	Analytical Element Model	Stochastic Uncertainty Analysis
	Yes	No	Numerical Model	Sensitivity analysis
	No	Yes	Numerical Model	Sensitivity analysis
	No	No	Numerical Model	Stochastic Uncertainty Analysis

**Source Protection Extent**

Method for calculating the area of a **provisional Registered Drinking Water Supply Protection Extent**.

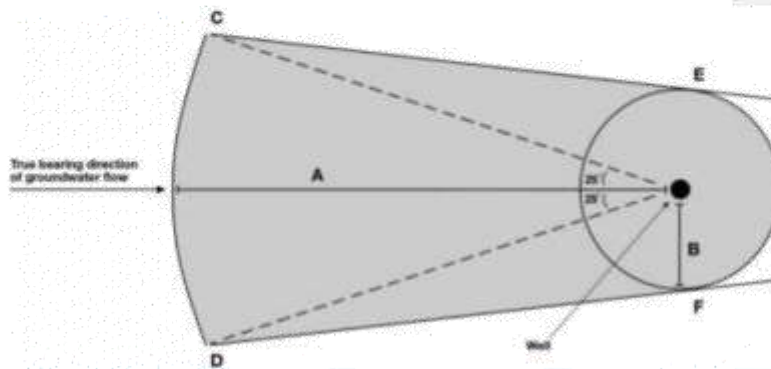
Existing groundwater Registered Drinking Water Supplies that provide drinking water to between 25 and 500 people for not less than 60 days per year will be protected for the distances specified in Figure 1 and Table 4 below. This provisional protection extent applies until the relevant resource consent requires replacement or until an application to amend the protection extent is made in accordance with the requirements of Tables 2 and 3.

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**Figure 1 Method for calculating the area of a provisional registered drinking water supply extent**



The area of the source protection extent is determined by selecting from the Table 4 below depending on the screen depth (or well depth if no screen depth is recorded) and aquifer type.

**Table 4: Provisional Protection Extent**

Screen Depth (or well depth if no screen depth is recorded)	Aquifer Type	Protection Distances (m)	
		Up gradient from bore (A)	Radius around bore
<10m	All	2,000	200
10 - <30 m	Unconfined or semi-confined	1,000	200
	Confined	100	100
30 - 70 m	Unconfined or semi-confined	500	200
	Confined	100	100
>70 m	Unconfined or semi-confined	100	100
	Confined	100	100

#### Public Information

All existing and new Registered Drinking Water Supplies and their source protection zones or extent will be added to the Registered Drinking Water Supply Source Protection map layers on Hawkes Bay Regional Council GIS mapping website.

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## SCHEDULE 11: HERETAUNGA PLAINS STREAM FLOW MAINTENANCE AND HABITAT ENHANCEMENT SCHEME

The TANK Plan provides for a **Water User Collective** to work collectively by or on behalf of permit holders to meet local water quality, quantity and environmental objectives for streams affected by stream depletion.

Alternatively, water permit holders would be subject to cease take requirements when relevant trigger flows in affected streams are reached.

A Water User Collective will manage stream flow depletion from applicable permits for streams affected by stream depletion. A permit may have stream depletion effects on more than one stream, but will be required to manage stream depletion through a **Water User Collective** for the one that is most affected based on the total stream depletion amount.

**Heretaunga Plains Water Management Unit** requirements for stream flow maintenance and habitat enhancement will be imposed through conditions of a water permit as specified in Rule TANK 7.

The transfer and discharge of water required to operate such a scheme is subject to Rule TANK 15. This schedule sets out the requirements for the establishment of a Water User Collective and its operation and management in order for it to be enabled under Rule TANK 15.

The requirements of this Schedule can be combined with those of Schedule 5 in order that wider water quality issues can also be met through this collective approach.

A **TANK Water User Collective** must prepare a **Plan** that meets the requirements set out below. This programme must identify the key water quality and water quantity management issues identified in this Plan that are relevant to:

- The affected streams and any applicable trigger flows for management
- The extent and duration of stream flow pumping
- The management of riparian land to improve ecosystem health, including by reduction of macrophytes growth
- The water quality state, especially in relation to oxygen and temperature

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

### Plan Requirements

#### Section A

##### 1. Governance and Management

Each **TANK Water User Collective** must undertake to carry out the requirements of Sections A and B and must specify in writing the manner in which it will carry this out. This must address the following:

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

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

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- b) Conditions of membership of the Collective by individual water permit holders (or the person giving effect to the permit), including the circumstances and terms of membership, sanctions or removal from the Collective including in relation to unreasonable non-performance of actions identified in clause 2 below.
- c) The process for assessing water or habitat enhancement contributions at an individual property level compared to combined collective actions for managing stream flow triggers and habitat enhancement.

*Note 1: the Collective 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 permit holder to comply with cease take conditions required under Rule TANK 7*

#### Information and management systems and processes to ensure:

- d) Competent and consistent performance in meeting the requirements of this schedule
- e) Robust data management, including up-to-date registers of TANK Water User Collective Members.
- f) Timely provision of suitable quality data and information required under the following clauses to Hawke's Bay Regional Council
- g) Conditions of membership of the Collective by individual permit holders (the 'Members') or the person giving effect to the water permit who commit to the Plan including provision of information to enable reporting requirements to be met.

#### A description of the Plan area including

- h) locations and maps,
- i) land uses,
- j) locations of:
  - (iii) rivers, streams
  - (iv) drains (including subsurface drains),
  - (v) wetlands, springs
- k) property boundaries,
- l) up-to-date details about holders of permits subject to this programme and anyone with responsibility for compliance with permit conditions.

#### Section B: Requirements for Water User Collectives

##### This section sets out the requirements for each Water User Collective Plan

#### 2. The Plan must include information as relevant about:

- a) The total stream flow depletion quantity in litres per second calculated using the Stream Depletion Calculator for each permit that is part of this Collective.
- b) Locations of points of take where the flow depletion water will be taken for stream flow maintenance and how this is to be provided for within relevant water permit allocations
- c) Locations of points of take where water is to be discharged for stream flow maintenance provided:
  - (i) The length of stream to be affected by stream flow maintenance is maximised within the catchment subject to the trigger flow;

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- (ii) The amount of water transferred and discharged is able to be separately metered or measured.
- d) Drawdown and stream depletion effects of any water taken and discharged for stream flow maintenance where they may be different from drawdown effects that occur as a result of exercise the permit.
- e) Management of water takes subject to this programme to reduce cumulative stream flow depletion effects
- f) Locations where riparian land can be managed to meet the outcomes specified in Policy 9 including;
  - (i) Where riparian planting will provide shade that reduces macrophyte growth and water temperature
  - (ii) re-construction of stream profile to provide both flooding and drainage as well as improved ecosystem habitat.
- g) Whether wetlands will be constructed to improve ecosystem health including to meet the outcomes specified in Policies 12 and 13
- h) 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
- i) Consultation with affected mana whenua

### 3. Approval

3.1 The Water User Collective Plan prepared subject to the requirements of this Schedule will be submitted in association with a water permit application as required by Rule TANK 15. In making decisions to approve this plan as part of the conditions of the water permit application the Council will take into account;

- a) whether the requirements of this Schedule are met
- b) whether the plan is consistent with the policies, water quality objectives and milestones that are relevant for the Water User Collective
- c) whether the Plan was appropriately informed by person(s) with the necessary professional qualifications to make assessments about the cumulative stream depletion effects and the effects of the pumping for stream flow maintenance including through the application of the Hawkes Bay Heretaunga Plains Groundwater Model and Stream Depletion Calculator
- d) whether the governance and management systems are in place to enable the implementation of the programme.

3.2 Where approval is not given, the requirement of Rule TANK 15 is not able to be met and permit holders are then subject to Rule TANK 7 (f)

### 4. Information Requirements

4.1 The Water User Collective must prepare a statement of the data and information that will be collected in order to monitor implementation and report to Council.

4.2 Information will be required where appropriate about:

- a) changes to membership, including holders of water permits or anyone giving effect to the water permit;
- b) the results of any environmental monitoring carried out by the Collective including in relation to oxygen and temperature in streams being managed by this plan;

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- c) water meter data to record the amount and duration of stream flow maintenance pumping
- d) the mitigation measures or practices carried out to enhance ecosystem habitat and water quality, that will be adopted by the property owners or managers and as detailed in section 2.1;

#### 5. Reporting and Review

5.1 A summary report on the implementation of the Plan shall be submitted annually to the Hawke's Bay Regional Council or less frequently as determined by Council if all agreed mitigations have been completed, and water quantity and quality objectives are being met.

5.2 The report will be supplied in the format specified by Council.

5.3 The report will include:

- a) information collected under section 2;
- b) 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);
- c) issues or matters that require input or direction from the Council, including the management of activities outside the Water User Collective which may be adversely affecting the achievement of the of programme objectives, including identification of additional information/support from HBRC that would assist in the achievement of the objectives of the programme.

5.4 Every 5 years the annual report shall provide information about

- a) any trends in
  - (i) the quality of water in the streams subject to the trigger flow
  - (ii) the state of ecosystem health
- b) identification of opportunities for improvements to the programme

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## 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 while taking into account water sharing arrangements, crop rotations, and the effects of previous water take bans or droughts on actual water use allocate 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 elsewhere 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) for irrigation takes, 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 stream depletion caused by that take (a take may cause stream depletion in 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 calculated on the basis of 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 flow maintenance scheme** is a stream flow maintenance scheme developed to pump groundwater into the affected stream when the trigger flow is reached. If no 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.

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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?

**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 5C 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 [a harvest plan or management plan as provided for in the National Environmental Standards for Plantation Forestry, 2017](#)

**Fre<sup>3</sup>** means [the frequency of floods that are three times above the median flow for a river as determined by 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.

**Heretaunga Plains Groundwater Model** is [a numerical model for the waters of the Heretaunga Plains and meets the requirements for artisanal flow and stochastic uncertainty analysis as provided for in Schedule 11](#)

**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 -

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their place to stand and belong. Marae are places of refuge for Māori and provide facilities to enable Māori 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”

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

**Registered Drinking Water Supply (or Supplies)** means a drinking water supply that is recorded in the drinking water register maintained by the Chief Executive of the Ministry of Health (the Director-General) under section 69J of the Health Act 1956 that provides no fewer than 25 people with drinking water for not less than 60 days in each calendar year

**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 an area surrounding the point of take for a registered drinking water supply that provides no fewer than 501 people with drinking water for not less than 60 days in each calendar year where plan provisions apply and includes any provisional Source Protection Zone and is defined by methods specified in Schedule 11. (information about the location of SPZs can be found on the Council's webpage)

**Source Protection Extent** is an area surrounding the point of take for a registered drinking water supply that provides no less than 25 and no more than 500 people with drinking water for not less than 60 days in each calendar year and includes any Provisional Source Protection Extent and is defined by methods specified in Schedule 11. (information about the location of SPZs can be found on the Council's webpage).

**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

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

### Management Options Considered

The adverse effects of stream depletion from historic groundwater abstraction on connected surface water bodies and on aquifer levels are acknowledged. Reducing the amount of water allocated and used is one method to address this. However, the extent and variable effect of allocation reductions to prevent stream depletion effects and the resulting adverse impact on social and economic well-being led to the decision to explore the effectiveness of stream flow maintenance schemes in favour of further allocation reductions as part of the preferred management approach within this plan change.

The Plan adopts a range of new measures to both reduce the amount of water allocated and used, and to reduce impacts of groundwater abstraction on connected waterbodies. These measures are summarised below.

Table 1; Heretaunga Plains aquifer management

Provision	Function	Comment
Allocation limit	No more water can be abstracted from the aquifer (the Heretaunga Plains Water Quantity Management Unit).	Some uncertainty still exists about the exact quantity that reflects the sustainable limit for abstraction given the complexities of managing cumulative stream depletion effects, but HPWMU currently very over-allocated in relation to actual versus allocated amounts.
Actual and reasonable water use	Policy and rules enable existing permit holders to re-apply for water based on actual and reasonable water use. This is defined for irrigation and requires evidence about water and /or land use in the 10 years prior to 2017. Water use now restricted by annual volume.	Applies to all water use activities (except as for urban use below). Will result in a lower level of water allocation and use.
Municipal and community water use	Limited by existing water permits. Urban development to be met within these limits or as provided by transfer and change of use policies. No new water from Heretaunga Plains aquifer to be allocated to urban end uses.	Reflects the priority allocation objective for human use.
Surface water allocation limits	New allocation limits for surface water takes. All takes from surface flows managed as a subset of the Karamu River. Where a groundwater take has a direct effect on stream flow, they will be considered and managed as a surface take (with allowance for a change to the point of take to reduce adverse effects on streams).	Karamu river and tributaries currently cumulatively over-allocated.
Surface water minimum flows and trigger flows	Surface takes must cease take if minimum flow reached. At trigger flows, there must be a management response by groundwater users to ensure flow maintained in order to avoid a cease take, especially by collective management and to improve stream ecosystem health through improved temperature and oxygen levels.	Surface takes can be moved to groundwater if viable (adverse effects able to be managed). The stream depletion calculated by new Stream Depletion Calculator
Efficient water use	New application of IriCalc model to calculate irrigation water demand including a minimum 80% level of water use efficiency. All uses subject to 80% efficiency of use except urban supplies which must progress towards a defined level of infrastructure performance	Allows time to meet new standards if large scale infrastructure upgrade necessary
Reliability of supply standard	The IriCalc model will be used to assess the amount of water required to meet demand 95% of the time (a limited volume of water will be allocated)	Provides incentives for efficient use and management of available water
Transfers	Transfer of permits from place to place more regulated to prevent any increase in usage.	Exception for transfers to urban/community use and for stream flow maintenance

*Modelling Impact of Reductions in Flow*

The Heretaunga Plains Aquifer groundwater scenario report describes the impacts of management mitigation measures.<sup>1</sup>

Modelling was carried out to determine sensitivity of the aquifer and connected streams to pumping. The report noted;

*"A large reduction in pumping would be required to generate a meaningful improvement in lowland streamflow. Sensitivity of groundwater levels to pumping was estimated in aquifer specific capacity terms to be about 0.35 m water table decrease per 10% increase in pumping."*

Table 2 below provides the results of model predictions for reducing pumping on the connected streams and rivers. The results show substantial reductions in pumping would be required to avoid stream depletion effects. The costs of substantial reduction in pumping are very high and would significantly impact on irrigators, industrial and urban water users.

There are also costs associated with the new allocation regime which will limit access to water, particularly in a dry year these are further summarised following.

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<sup>1</sup> <https://www.hbrc.govt.nz/assets/Document-Library/Publications-Database/5018-Heretaunga-Aquifer-Groundwater-Model-Scenarios-Report-final.pdf>

Table 2: Percentage change in flow compared to no change in pumping

% change in flow comparing to no change in pumping																
stream	-100%	-50%	-30%	-20%	-10%	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Raupare	66%	33%	20%	13%	7%	0%	-7%	-13%	-20%	-27%	-34%	-40%	-47%	-54%	-60%	-67%
Irongate	152%	76%	46%	31%	15%	0%	-15%	-31%	-45%	-58%	-71%	-80%			-106%	-115%
Mangateretere	310%	155%	93%	62%	31%	0%	-31%	-61%		-115%	-139%	-148%	-157%	-167%	-176%	-185%
Karamu(gains in main stem)	49%	24%	15%	10%	5%	0%	-5%	-10%	-15%	-20%	-25%	-30%	-35%	-40%	-45%	-50%
Karewarewa	423%	211%	113%	71%	33%	0%	-31%	-57%	-82%	-100%	-119%	-124%	-130%	-135%	-140%	-145%
Ngaruroro *	82%	41%	24%	16%	8%	0%	-8%	-16%	-25%	-33%	-41%	-49%	-57%	-65%	-73%	-81%
* % base on 1000 L/s river flow																

>25% flow lost	25 % flow added
>50% flow lost	50 % flow added
dry	100 % flow added

### Modelling Impact of 'Actual and Reasonable' Re-allocation

The development of the Plan depending on a number of modelling outputs both in terms of how the aquifer system responded to various management scenarios and farm scale and regional modelling to determine impacts on the economy. The economic modelling was based on the new actual and reasonable water allocation regime (note that it used SPASMO as the water demand model rather than the proposed IriCalc model).

The economic assessment modelling compared unrestricted water use (such as in 2012 with the more restrictive regime as is proposed in the draft.

Apart from water allocated for municipal use, water re-allocation (via consent expiry and re-application) is to be based on an 'actual and reasonable' basis that for irrigators includes consideration of existing water use investment and reduction to a modelled amount based on the water needed to meet crop water demand 95% of the time. In addition to this, demand will also be based on a new efficiency standard meaning that some irrigation systems will not be able to meet crop demand within the allocated amount and some irrigators must look to improving irrigation systems. Other water users will also be required to demonstrate efficient water use.

The impact of this allocation regime on irrigation water use has been modelled and the change to the groundwater allocations in the Heretaunga Plains is illustrated in figure 1 below.

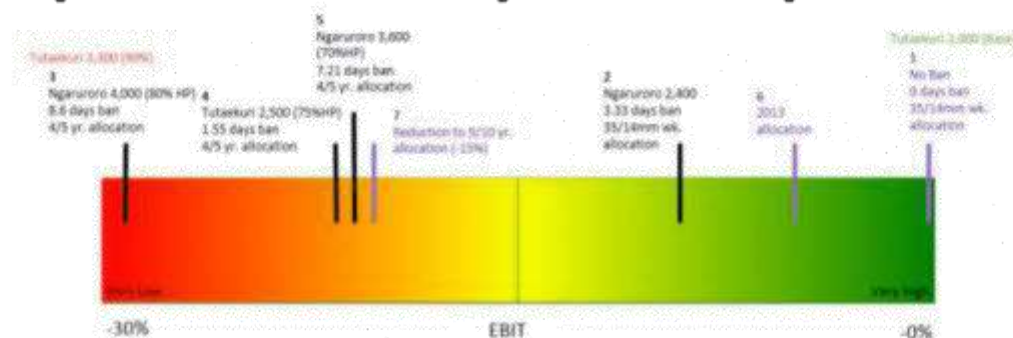


Figure 1: Reduction in EBIT (%) average over 18 years from no ban at 0%

The proposed new allocation regime represents an average reduction of up to 15% across groundwater users. The impact of this reduction in water security of supply on primary production and on subsequent supply and processing chains is significant at the farm scale and at a regional scale (refer in particular to the report by Market Economics at page iv<sup>2</sup>).

Further to the new re-allocation rules, Heretaunga Plains groundwater users must also contribute an amount of water equivalent to their stream depletion effect to the proposed stream flow maintenance scheme. The impact on primary production of requiring permit holders to contribute part of their water allocation was not modelled separately, although the total costs of such a scheme were estimated.

The overall scheme costs were estimated to be about \$2m capital cost and an average operating expenditure of about \$156,000. The irrigators supported the ability to work collectively to find the most efficient way of meeting trigger flows in affected streams.

The total amount of water required to ensure stream flows were augmented once trigger flows were reached was modelled at approximately 4.8 Mm<sup>3</sup>/year or 6% of the total allocation. This 6% is intended to come from within the 'actual and reasonable' permit allocation on top of the already modelled reductions resulting from the annual allocation and efficiency and reliability standards.

<sup>2</sup><https://www.hbrc.govt.nz/assets/Document-Library/TANK/TANK-Key-Reports/Economy-wide-Impacts-of-Proposed-policy-options-TANK-catchments-Market-Economics-Aug-2018.PDF>

*Urban Demand/Supply*

Water permits for urban supply will be managed slightly differently. This is to reflect the priority order for meeting the essential human needs for water, the health and well-being of communities and to enable water supply authorities to meet functions and duties for delivery and management of assets and services in a staged manner.

Napier and Hastings Councils currently have permits that allow for increasing water use in anticipation of urban growth. This kind of allocation certainty is important to enable appropriate management of urban development. Urban development up to 2045 is guided by the Heretaunga Plains Urban Development Strategy, which is jointly prepared by the HBRC and two territorial authorities.

The TANK PC9 allows water already allocated for urban supplies to continue to be allocated for urban water supply and not be subject to an actual and reasonable use assessment. However urban water suppliers will need to provide more in depth targeted supply and demand management that will over time include consideration of wider water metering of urban water uses to drive efficient water use and provide head-room for urban growth.

This enables planned and anticipated urban development to be provided for within a certain limit. Note that if growth exceeds that provide for in HPUDS, reassessment of water supply and demand and other sources of water would be required. In this case a future plan change might also consider the costs and benefits of re-allocation of water to municipal supply from other end uses.

The new plan limits for water mean that urban growth must be met within limits and through improvements in water supply and demand management. There will be increasing urban demand for water over time and although the exact nature of the increase is unknown, the HPUDS strategy considered a range of low to high potential urban growth scenarios and water demand resulting from these is recognised. If actual demand is higher than predicted, the council's water permits maximum amounts will be reached faster.

In the interim, all three councils are commencing a more integrated approach to community messaging about water use, including targeting water use by domestic users.

Furthermore, there is recognition at a national level that the management of the 3 urban waters has been lacking investment and management attention, including at the territorial and the regional council levels. Work at a national level is underway to develop tools and metrics by which performance of urban water networks can be judged and reported on.

**MANAGEMENT OPTIONS**

Feedback from the RPC sub-group seeks that the policies are more directive and signal a regime that reduces current water use, including also a sinking lid approach so that no new water is allocated. This is consistent with existing draft provisions although amendments to the policies are suggested to increase clarity and transparency of the policy direction. There was also further discussion about the options for the allocation limit which reflect discussion at the RPC meeting.

**Option 2**

Adopts 80 M m<sup>3</sup> /year in both policy and rules as an interim limit not a target. Feedback from the RPC sub-group suggests that policy direction should more clearly incorporate a sinking lid approach. This was already being provided by the draft, although an exception for re-allocation was being provided for municipal or community supply.

The modelling indicates that re-allocation will be less than the 2012/13 amount as it reduces allocation to a fixed annual amount based on specified reliability of supply and efficiency standards.

Until the re-allocation and review has been carried out, however, any changes to the allocation limit, and therefore the level of over-allocation and impact on existing users of either the 90 or the 80 Mm<sup>3</sup>/year (or some other allocation limit), is not known. There needs to be assessment about the impacts of reductions across the range of water users.

Neither the options for further reduction nor the impacts of these reductions are able to be calculated without having first understood the actual amount allocated.

#### **Option 2a**

Policy (34) adopts a series of management actions designed to avoid further adverse effects from occurring, including an interim allocation limit and direction that new water allocations are avoided. The associated rule makes any allocations above the limit non-complying activities.

New applications could be made prohibited activities, which means no application can be made for abstraction while allocation exceeds the amount specified. The plan also has objectives and policy about water use priority, including high priority for essential human needs. These could not be referred to if all water take activities in the Heretaunga Plains management zone were to be prohibited. Policy 44 applied in relation to re-allocation of water should the renewal/review process result in less than the specified amount being allocated –however it is suggested that this provision be removed as it does not reflect wider concerns about the level of over-allocation.

Non-complying status is often reserved for those activities where the potential adverse effects are great but do not necessarily warrant prohibition. An application for a non-complying activity can be declined or granted (with or without conditions). Councils can grant consent where an application can meet any of the following tests:

1. the adverse effects on the environment will be minor or
2. the application is not contrary to the objectives and policies of the plan.

The non-complying activity status can be useful for situations where it is intended that consents only be granted in exceptional circumstances (for example in managing cumulative adverse effects on a resource that is at, or close to, capacity). However, using the non-complying activity status in this way requires clear, strong, objectives and policies to be included in plans. Without such clear, strong, objectives and policies, there is a risk that the threshold to meet objectives and policies is too low, inadvertently allowing consents to be granted where it may not otherwise have been desirable to do so.

The prohibited activity status is the most restrictive of any activity status and therefore must be used with care. The decision to use it should be backed with strong evidence of its necessity, including justification through objectives and policies.

It is considered that for the Heretaunga Plains, all of the circumstances under which a water permit application might be made are not known and a prohibited activity prevents any consideration of the merits of such an application. Further, the objectives and policies provide strong direction in relation to the management of groundwater abstraction and any application would need to be 'exceptional' in order to be granted.

#### **Option 3**

This option is to reduce water re-allocation to an 'actual and reasonable' level and then to reduce the amount further by 10% at a rate of 1% less per year. This is to reflect a direction by the RPC that, in addition to the measures outlined above, water use must be reduced even further through application of water use efficiencies and innovations or reductions in irrigated area within the term of the water permit.

The RPC indicated that a 1% reduction per year should also be applied to the urban water takes. The urban take is currently not at optimal efficiency and the two territorial councils are both adopting (and being required to adopt through the plan) a longer term approach to water management that includes more efficient network management. Calculation of what reduction of 1% per year entails

is a more difficult proposition as they are not subject to the same actual and reasonable assessment on which to base the starting 1% calculation.

The imposition of new limits means the district's and city's ability to service urban demand over time is now constrained by their water permit limits and by policy and rules regarding predicted demand in HPUDS. A further 1% reduction further impacts on that and also on their ability to meet requirements of the National Policy Statement on Urban Development Capacity.

This economic impacts of option 3 have not been assessed however, a further 10% reduction in water allocated will be in addition to the impacts already modelled of the new plan provisions.

The likely significant economic impacts of actual and reasonable re-allocation (as proposed) reduce allocations by about 15%. The stream flow maintenance requirement was modelled to be about 6% of the total allocations. The impact of this on farm EBIT and consequential flow on effects was not assessed, although the total costs of the scheme were estimated (capital costs of \$2m and annual operating costs of around \$156,000).

A further 10% reduction (at 1% per year) reduces the total modelled water use by 31%.

The impact of a reduction in a 10% reduction in the amount of water provided for urban development has not been assessed.

Table 1: Outstanding water bodies and how they are provided for in PC9

OWB PLAN CHANGE 7 VERSION TO BE NOTIFIED				TANK PC9 PROVISIONS
Proposed Outstanding Water Body	Outstanding Value(s)	Description of Outstanding Value(s)	Significant Value(s)	
<b>Wetlands</b>				
Kaweka Lakes	Cultural, spiritual  Ecology  Natural character	<p>Lake Rototuna and Lake Rotoroa are situated in the Kaweka Forest Park, surrounded by indigenous vegetation, with no sign of human modifications.</p> <p>The Lakes are ecologically significant because of the large number of plant species and vegetation types in the surrounding area.</p> <p>Lake Rototuna is the best example of a waterbody that still remains in an all-native vegetated state in the region and supports the best composition of submerged aquatic plants in Hawke's Bay. Lake Rotoroa has a large population of kōaro which are 'lake-locked' and carry out their entire life cycle in freshwater</p> <p>Tāngata whenua of the region have advised that the Kaweka and Ruahine Ranges wetlands have outstanding cultural and spiritual values.</p>	<p>Indigenous fish populations</p> <p>Indigenous bird populations</p> <p>Indigenous plant populations</p> <p>Hydrological</p> <p>Social and cultural activities</p> <p>Mahinga kai</p>	<p>Objectives for wetlands/lakes including identified values;</p> <ul style="list-style-type: none"> <li>• Healthy and diverse indigenous species</li> <li>• Contribution to connected waterways</li> <li>• Improved hydrological functioning</li> <li>• Social and cultural activities, mahinga kai, including an objective to increase in total wetland area</li> </ul> <p>Policies 1, 3, for general management of wetlands and lakes</p> <p>Policies 12 and 13 for targeted wetland protection and enhancement</p> <p>Policies 21 and 22 for catchment based land and water management.</p> <p>Policy 25 for milestones/targets for wetlands protection and enhancement</p> <p>Existing RRMP rules</p> <ul style="list-style-type: none"> <li>• Activities not to adversely affect wetlands</li> </ul>
Lake Poukawa and Pekepeka Swamp	Cultural, spiritual	<p>Lake Poukawa, also known as Te Wai-nui-a-Tara, is a small shallow lake with a surface area of 89 hectares. The lake has an adjoining margin of wetland vegetation which is intermittently covered in water depending on the time of year. The wetland area contains swamp nettle (<i>Urtica linearifolia</i>) and the acutely threatened aquatic liverwort (<i>Ricciocarpos natans</i>) which is nationally endangered.]</p> <p>The Lake has been declared a non-commercial eel fishery, one of only a few lakes in New Zealand to have this designation.</p> <p>Lake Poukawa is a taonga of Heretaunga Tamatea, traditionally used for food gathering. The Lake is well known for its eel fishery which is of considerable cultural importance to the people of Te Hauke and their hapū Ngai Te Rangikōianake. The history of Lake Poukawa is directly related to the eels of the lake. The mana of each chief of Te Wheao is related to control of Lake</p>	<p>Indigenous fish populations</p> <p>Indigenous bird populations</p> <p>Indigenous plant populations</p> <p>Hydrological</p> <p>Social and cultural activities</p> <p>Mahinga kai</p>	<p>New RRMP rules</p> <ul style="list-style-type: none"> <li>• Setbacks from wetlands</li> <li>• New allocation limits for all waterbodies and tributaries (see policy 39 and including specifically for Lake Poukawa)</li> <li>• No changes to wetland flows or levels</li> </ul> <p>Schedule 3 for priority catchments (Lake Poukawa catchment for nitrate loads and concentration)</p> <p>Schedule 5</p> <ul style="list-style-type: none"> <li>• Specific instruction for wetlands in farm plans</li> </ul> <p><b>Commentary</b></p> <p><i>The importance of wetlands for a wide range of values and</i></p>

		<p>Poukawa and its resources.</p> <p>Lake Poukawa has been the scene of many battles, with a number of wāhi tapu and wāhi taonga sites in the area. The origin of the name 'Poukawa' is said to have arose as a result of a disagreement between two local chiefs Te Rangihirawea and Te Rangikawhiua over fishing rights in the lake.</p> <p>Lake Poukawa supports a high diversity of bird species, with notably high numbers of the Australasian Bittern, New Zealand dabchick, pied stilt, and shoveler ducks.</p> <p>Tāngata whenua of the region have advised that Lake Rotorua and Lake Rototuna have outstanding cultural and spiritual values</p>		<p><i>functions has been a particular focus of the TANK Plan Change.</i></p> <p><i>While the RRMP currently directs just the protection and enhancement of remaining significant wetlands, the TANK PC9 takes a wider perspective and includes an objective that all remaining wetlands are to be protected and that the creation or re-instatement of new wetlands is also part of the TANK PC9.</i></p> <p><i>The TANK plan Change does not specifically mention the named wetlands and lakes.</i></p>
Ngamatea East Swamp	<p>Cultural, spiritual</p> <p>Ecology</p> <p>Natural character</p>	<p>The Ngamatea East Swamp is a 300 hectare unmodified wetland, the largest in Hawkes Bay.</p> <p>The wetland contains high numbers of threatened indigenous plant species, including the sedge <i>carex strictissima</i> which is nationally endangered and the <i>ranunculus recens</i> var, which is 'at risk' and threatened.</p> <p>The Ngamatea East Swamp is highly valued for the cleansing provided by the water catchment, storage and drainage processes, and as a possible food source. Spiritual essence derives from being a headwater system to the Rangitikei River.</p> <p>Tāngata whenua of the region have advised that the Ngamatea East Swamp have outstanding cultural and spiritual values</p>	<p>Indigenous fish populations</p> <p>Indigenous bird populations</p> <p>Indigenous plant populations</p> <p>Hydrological</p> <p>Social and cultural activities</p> <p>Mahinga kai</p>	
Kaweka and Ruahine Ranges wetland	Cultural, spiritual	Tāngata whenua of the region have advised that the Kaweka and Ruahine Ranges wetlands have outstanding cultural and spiritual values		

Rivers				
Ngaruroro River	Cultural, spiritual	The Ngaruroro River is the largest river flowing across the Heretaunga Plains.	Ecosystems	New objectives
	Recreation	The full name of the Ngaruroro River is Nga- ngaru-o-nga-upokororo-mai-i-mokotuararo-ki- Rangatira, with the river taking its name from an incident in which a dog belonging to the ancient deity Mahu startled some small fish known as upokororo. As the shoal of fish dashed away they caused ngaru or ripples in the water	Indigenous aquatic populations, particularly, torrent fish, whitebait, macroinvertebrate communities	<ul style="list-style-type: none"> <li>Range of Ngaruroro River and tributary values provided for; <ul style="list-style-type: none"> <li>Healthy ecosystem</li> <li>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;</li> <li>people to safely carry out a wide range of social, cultural and recreational activities especially swimming and cultural practices of Uu and boating, including jet-boating in the braided reaches of the Ngaruroro;</li> <li>protection of the natural character, instream values and hydrological functioning of the Ngaruroro mainstem and Taruarau and Omahaki tributaries</li> <li>collection of mahinga kai to provide for social and cultural well-being;</li> <li>people and communities to safely meet their domestic water needs;</li> <li>primary production water needs and water required for associated processing and other urban activities to provide for community social and economic well-being;</li> </ul> </li> <li>Recognition for; <ul style="list-style-type: none"> <li>contribution to water flows and water quality in the connected Heretaunga Plains Aquifers;</li> <li>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.</li> </ul> </li> </ul>
	Ecology		Indigenous bird populations	<p>Objective 4 and Schedule 1</p> <ul style="list-style-type: none"> <li>Water quality state objectives (maintain or improve)</li> </ul> <p>Policy 1 and 4 targeted methods to improve quality</p> <p>Policy 18, 19, 25 Rules and Schedules 3 and 5 Nutrient and sediment management</p>
	Natural character		Trout fishery	
	Landscape	The Ngaruroro River flows through a variety of landscapes along its length. In its upper parts the Ngaruroro River is in a near natural state with impressive scenery flowing through indigenous forest, tussock and scrubland and spectacular narrow rocky gorges with vertical schist walls. The Ngaruroro River gorge is one of the best two gorges in Hawke's Bay. From Whanawhana, the Ngaruroro River opens to wide braided channel which is the best example in the region, and highly valued for jet boating and as a bird habitat supporting high numbers of banded dotterel and pied stilt.	Social, recreational and cultural activities including swimming, cultural practices of Uu, boating	
	Geology		Natural character	
		Upstream of Kuripapango, the Ngaruroro River is in excellent ecological condition, with pristine water quality and one of the healthiest macroinvertebrate communities in the region. The upper Ngaruroro River contains a high quality habitat for both native fish and salmonid trout, being largely natural with good water quality. The upper river is particularly renowned for its salmonid angling, whitewater boating opportunities and its impressive scenery.	Hydrological	
		The lower river and estuary area support a high diversity of native birds, some of which are classified as at risk or declining or globally endangered, including the black-billed gull, black-fronted tern and Australasian bittern.	Mahinga kai	
		The Ngaruroro River supports a high diversity of fish in its lower river and estuary areas, including a number of native fish which are classified as at risk or declining. In its upper parts the Ngaruroro River contains a high quality habitat for both native fish and salmonid trout, being largely natural with good water quality.	Domestic water supply	
			Primary production water use (including for associated processing and other urban activities)	

		<p>The Ngaruroro River is a taonga of Heretaunga Tamatea, Mana Ahuriri, and Ngāti Tūwharetoa. The headwaters are commonly expressed as being at the heart of the Kaimanawa Ranges, the River forms a natural highway from coast to mountains and there are many settlements and sites of significance along its banks, including the presence of Pā, Kāinga, urupā, Wāhi Tapu, wāhi taonga and wai tapu.</p> <p>The Ngaruroro River has significance as a mahinga kai and has been a significant marker of land interests from ancient times. A pou once stood at Whanawhana which represents an important political demarcation between hapū.</p> <p>Tāngata whenua of the region have advised that the Ngaruroro River and Estuary have outstanding cultural and spiritual values</p>	<p>Policy 39, Rules and Schedule 6 and 7</p> <ul style="list-style-type: none"> <li>• Minimum flow</li> <li>• Lower allocation limit for surface water abstraction, no more groundwater abstraction</li> </ul> <p>Policy 53 and Rules</p> <ul style="list-style-type: none"> <li>• Damming prohibition on mainstem and tributaries (Taruarau and Omahaki)</li> </ul> <p>Schedule 3 for priority catchments (for sediment nitrate loads and concentration)</p> <p><b>Commentary</b>  <i>The Ngaruroro River flows from the ranges through a diverse landscape to the groundwater of the Heretaunga Plains, the Waitangi Estuary and the sea. The diversity of the landscape is matched by diverse land and water uses and values. These are all reflected in the Plan Change through a range of land and water use objectives, policies and rules.</i></p> <p><i>There are complex and interconnected relationships between river flow and groundwater levels and on instream, social and cultural values of surface water and abstraction of water (for a wide range of human health, municipal and commercial water uses). The TANK addresses these relationships and the effects of land and water use activities through a range of policies and methods.</i></p> <p><i>While the TANK PC9 does not include a formal assessment of the significance of all the water body values in relation to each other, it does particularly acknowledge some values in the upper reaches as requiring protection and identifies some instream values that must be specifically enabled (such as the indigenous species habitat and jet boating on the braided reaches). Water quality states are specified in relation to the most critical or sensitive value for any particular attribute and this results in protection for all other values. Freshwater quality state objectives are provided as a minimum – if current state is higher than that specified, no degradation to a lower state</i></p>
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				<p>is allowed.</p> <p>The Plan introduces a new and reduced allocation limit to reduce the impact of abstraction in the Ngaruroro catchment on river flows. It also ensures mainstem instream values are protected by establishing allocation limits for abstraction at times of high flow and a prohibition on damming.</p>
Tūtaekurī River	Cultural, spiritual Ecology	<p>Ahuriri Hapū have a strong cultural association with the Tūtaekurī River, with the lower reach of the Tūtaekurī River traditionally utilised by Ngāti Pārau.</p> <p>Otatara Pā is wāhi tapu as an ancient pā and as an urupā. It held a prominent position over the river and is 'the guardian of all people who live in its shadow'. A site at Te Whare O Maraenui, located on the eastern bank of the Tūtaekurī River, contains an urupā of those who died during the battle at Te Pakake Pā.</p> <p>Heretaunga Tamatea, Ngāti Pāhauwera and Maungaharuru – Tangitū also have cultural association with the river, with the river once providing a major transport route into Mokai Patea (Taihape) and beyond. The Tūtaekurī River forms part of the rohe boundary between Heretaunga and Ahuriri.</p> <p>The Tūtaekurī River takes its name from an incident that occurred when Hikawera came to the aid of a starving party of travellers. He ordered many dogs, fish and kumara to be prepared to feed the hungry wanderers. The place where this occurred became known as Te Umukuri. The dog's offal was thrown into the river to replenish what was taken, hence the name Tūtaekurī.</p> <p>The Tūtaekurī River once was a significant mahinga kai providing much of the food supply for the local hapū. Otatara Pā was a major intersection between Heretaunga &amp; Ahuriri and it permitted access to eel weirs, fern root groves and kumara plantations in the hinterland. It also allowed access to Te Whanganui a Orotū.</p> <p>The upper reaches of the Tūtaekurī River are in a near natural state with pristine water quality and one of the healthiest</p>	<p>Ecosystems</p> <p>Indigenous aquatic populations particularly, torrent fish, whitebait, macroinvertebrate communities</p> <p>Trout fishery</p> <p>Indigenous bird populations</p> <p>Social, recreational and cultural activities including swimming, cultural practices of Uu and boating</p> <p>Natural character</p> <p>Hydrological</p> <p>Mahinga kai</p> <p>Domestic water</p> <p>Primary production water use (including</p>	<p>New objectives</p> <ul style="list-style-type: none"> <li>Range of Tūtaekurī River and tributary values provided for; <ul style="list-style-type: none"> <li>healthy ecosystems;</li> <li>healthy and diverse indigenous aquatic and bird populations especially, whitebait, torrent fish, macroinvertebrate communities and a healthy trout fishery;</li> <li>people to safely carry out a wide range of social, cultural and recreational activities, especially swimming and cultural practices of Uu and boating;</li> <li>protection of the natural character, instream values and hydrological functioning of the Tūtaekurī mainstem and Mangatutu tributary</li> <li>collection of mahinga kai to provide for social and cultural well-being;</li> <li>people and communities to safely meet their domestic water needs;</li> <li>primary production water needs and water required for associated processing and other urban activities to provide for community social and economic well-being;</li> </ul> </li> <li>Recognition for; <ul style="list-style-type: none"> <li>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.</li> </ul> </li> </ul> <p>Objective 4 and Schedule 1</p> <ul style="list-style-type: none"> <li>Water quality state objectives (maintain or improve)</li> </ul> <p>Policy 1 and 4 targeted methods to improve quality</p>

		macroinvertebrate communities in the region. Tāngata whenua of the region have advised that the Tūtaekuri River has outstanding cultural and spiritual values.	for associated processing and other urban activities	<p>Policy 18, 19, 25, Rules, Schedules 3, 4 and 5 Nutrient and sediment management</p> <p>Policy 39, Rules and Schedule 6 and 7</p> <ul style="list-style-type: none"> <li>Reduced minimum flow</li> <li>Lower allocation limit for surface water abstraction, no more groundwater abstraction</li> </ul> <p>Policy 53 and Rules</p> <ul style="list-style-type: none"> <li>Damming prohibition on mainstem and tributaries (Mangatutu and Mangaone)</li> </ul> <p>Schedule 3 for priority catchments (for sediment nitrate loads and concentration)</p> <p><b>Commentary</b>  <i>Like the Ngaruroro the Tūtaekuri River also flows from the ranges through a diverse landscape to the Waitangi Estuary and the sea. It has a smaller direct connection with the groundwater of the Heretaunga Plains. The diversity of the landscape is matched by diverse land and water uses and values. These are all reflected in the Plan Change through a range of land and water use objectives, policies and rules.</i></p> <p><i>The surface water abstraction pressure from the Tūtaekuri River is less than for other water bodies in the TANK catchments. The Plan seeks to improve the instream values by both reducing the allocation limit and increasing the minimum flow. This approach still enables existing levels of water use.</i></p> <p><i>PC9 also ensures mainstem instream values are protected by establishing allocation limits for abstraction at times of high flow and a prohibition on damming the mainstem and two of its tributaries.</i></p>
Karamu River	Cultural, spiritual	The Karamū River begins at Lake Poukawa, flowing through Havelock North and the Karamū area to join the Clive River at Pakowhai. It was once the main channel of the Ngaruroro River, but following a major flood in 1867 the Ngaruroro River changed its course to its current course, leaving behind a smaller flow, named the Karamū in reference to the Karamū trees which grew in abundance in this area.		<p>New Objectives</p> <ul style="list-style-type: none"> <li>Range of Karamu River and tributary values provided for <ul style="list-style-type: none"> <li>healthy ecosystems;</li> <li>healthy and diverse indigenous aquatic and bird populations, especially black patiki, tuna and</li> </ul> </li> </ul>

		<p>The Karamū River is taonga of Ngāti Hori, an important freshwater fishery for hapū. Maori have a long history of occupation and travel on and around the Karamū River.</p> <p>Tāngata whenua of the region have advised that the Heretaunga aquifer has outstanding cultural and spiritual values.</p>		<p>whitebait, and healthy macroinvertebrate communities;</p> <ul style="list-style-type: none"> <li>○ people to safely carry out a wide range of social, recreational, and cultural activities, including swimming and cultural practices of Uu and rowing and waka ama in the Clive/Karamu;</li> <li>○ collection of mahinga kai to provide for social and cultural well-being;</li> <li>○ people and communities to safely meet their domestic water needs;</li> <li>○ primary production water needs and water required for associated processing and other urban activities to provide for community social and economic well-being;</li> <li>• and provide for; <ul style="list-style-type: none"> <li>○ 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.</li> </ul> </li> </ul> <p>Objective 4 and Schedule 1</p> <ul style="list-style-type: none"> <li>• Water quality state objectives (maintain or improve)</li> </ul> <p>Policy 1 and 2 targeted methods to improve quality in priority order</p> <p>Policy 9, 18, 19, 25, Rules, Schedules 3, 4 and 5 Riparian land management and nutrient and sediment management</p> <p>Policy 39, Rules and Schedule 6 and 7</p> <ul style="list-style-type: none"> <li>• Reduced minimum flow</li> <li>• Lower allocation limit for surface water abstraction, no more groundwater abstraction</li> </ul> <p><b>Commentary</b>  <i>The state of the Karamu River is closely linked to the management of the Heretaunga Plains groundwater and also the development of the Heretaunga Plains Flood Control and Drainage Scheme which substantially changed the natural freshwater flow paths. The Ngaruroro River is also closely linked through historic natural and man-made events.</i></p>
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				<p>Those historic management decisions have significantly changed the nature of the Clive/Karamu and tributary water bodies and their current ecological and water quality state is poor. The Plan focuses on mitigation measures that will improve ecosystem health and water quality. It also establishes new cumulative water abstraction limits for the Karamu and its tributaries (the proposed allocation limit is currently over-allocated and measures are being adopted to claw back allocations).</p> <p>The importance of riparian vegetation in improving ecosystem health, including reducing temperature and improving oxygen has been acknowledged, as has the need for time to allow for better riparian management to be adopted and for trees to grow. This work links more widely to biodiversity values.</p>
Taruarau River	Cultural, spiritual  Ecology  Natural character  Landscape  Geology  Recreation	<p>The Taruarau River is in a near natural state with excellent water quality and one of the healthiest macroinvertebrate communities in the region.</p> <p>The River is very scenic, flowing through a variety of natural landscapes, from areas of rolling tussock country, scrubland and pine forests to impressive gorges with rocky overhangs.</p> <p>The Taruarau River gorge is "one of the best two gorges in Hawke's Bay".</p> <p>The Taruarau River is highly valued for its recreation qualities, particularly known as challenging whitewater run, suitable for experienced kayakers and rafters. The river is highly used by anglers in Hawke's Bay, fishing well all season.</p> <p>The Taruarau River is located within the traditional boundary of Heretaunga Tamatea and Ngāti Tūwharetoa. The river is associated with the early origins of Kahungunu and associations with the Ruahine Range. A stone known as Te Tokatamahoutu marks the junction of the Tāruarau and Ikawetea Streams.</p> <p>Tāngata whenua of the region have advised that the Taruarau River has outstanding cultural and spiritual values.</p>	Ecosystems  Indigenous aquatic populations, particularly, torrent fish, whitebait, macroinvertebrate communities  Indigenous bird populations  Trout fishery  Social, recreational and cultural activities including swimming, cultural practices of Uu, boating Natural character Hydrological Mahinga kai  Domestic water supply	<p>New objectives</p> <ul style="list-style-type: none"> <li>Range of Ngaruroro River tributary values including for Taruarau provided for;               <ul style="list-style-type: none"> <li>Healthy ecosystem</li> <li>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;</li> <li>people to safely carry out a wide range of social, cultural and recreational activities especially swimming and cultural practices of Uu and boating, including jet-boating in the braided reaches of the Ngaruroro;</li> <li>protection of the natural character, instream values and hydrological functioning of the Ngaruroro mainstem and Taruarau and Omahaki tributaries</li> <li>collection of mahinga kai to provide for social and cultural well-being;</li> <li>people and communities to safely meet their domestic water needs;</li> <li>primary production water needs and water required for associated processing and other urban activities to provide for community social and economic well-being;</li> </ul> </li> </ul>

			Primary production water use (including for associated processing and other urban activities)	<p>Objective 4 and Schedule 1</p> <ul style="list-style-type: none"> <li>Water quality state objectives (maintain or improve)</li> </ul> <p>Policy 1 and 4 targeted methods to improve ecosystem and water quality</p> <p>Policy 18, 19, 25 Rules and Schedules 3 and 5 Nutrient and sediment management</p> <p>Policy 39, Rules and Schedule 6 and 7</p> <ul style="list-style-type: none"> <li>Lower allocation limit for surface water abstraction, no more groundwater abstraction</li> </ul> <p>Policy 53 and Rules</p> <ul style="list-style-type: none"> <li>Damming prohibition on mainstem of Taruarau</li> </ul> <p><b>Commentary</b>  <i>The Taruarau River is noted for its instream values, landscape and hydrological functioning and is afforded a high level of protection from change including from damming of the mainstem, no water quality degradation and no further water allocation. Surface water allocations from the Ngaruroro tributaries are now constrained by the total allocation limit for the Ngaruroro catchment. Further, no new groundwater allocations are provided for above what is currently authorised.</i></p>
<b>Aquifer</b>				
Heretaunga Plains Aquifer	Cultural, spiritual  Geology	<p>The Heretaunga aquifer system consists of interconnected layers of water bearing gravels, sands, silts, clays and shells located beneath the Heretaunga Plains.</p> <p>The Heretaunga Plains Aquifer is a taonga of Ngati Kahungunu, who know the aquifer system as the "Heretaunga Ararau Haukūnui", being a large water resource, represented in the many rivers, creeks, the small tributaries fed by underground springs, springs of water, swampy ground, swimming holes, rock pools and quick sands.</p> <p>Tāngata whenua of the region have advised that the Heretaunga aquifer has outstanding cultural and spiritual values.</p>	<p>Domestic water supply</p> <p>Municipal water supply</p> <p>Primary production water use (including associated processing and other urban activities)</p> <p>Hydrological</p>	<p>New objectives for the Heretaunga Plains Groundwater Management Unit. This represents the modelled area for the Heretaunga Plains groundwater and although there are no maps provided the area is assumed to be the same/similar.</p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>the maintenance of groundwater levels at an equilibrium that accounts for annual variation in climate and prevents long term decline or seawater</li> </ul>

			<p>intrusion;</p> <ul style="list-style-type: none"> <li>contribution to water flows and water quality in connected surface waterbodies</li> </ul> <p>Objective 4, 9 and Schedule 1</p> <ul style="list-style-type: none"> <li>Water quality state objectives (maintain or improve)</li> </ul> <p>Policies 1, 6—9, Rules</p> <ul style="list-style-type: none"> <li>protection of water quality for safe drinking water</li> </ul> <p>Policy 34 – 38, Rules and Schedule 6</p> <p>Allocation limits, stream depletion management</p> <ul style="list-style-type: none"> <li>Over-allocation managed</li> <li>Interconnectivity with surface water <ul style="list-style-type: none"> <li>Minimum flows for cease take</li> <li>Trigger flows for flow maintenance</li> </ul> </li> </ul> <p><b>Commentary</b></p> <p><i>The Heretaunga Plains Water Management Unit includes the Heretaunga Plains aquifer which is important as part of the complex system of ground and surface water interconnections across the Heretaunga Plains. It also supports a wide range of abstractive water use including for the two major cities of Hastings and Napier and irrigates extensive area of horticultural crops.</i></p> <p><i>The Heretaunga Plains and its surface and groundwater resources have been subject to change over time through drainage and river realignment (both naturally through earthquakes and man-made) and water abstraction for a range of end uses.</i></p> <p><i>Aquifers are dynamic systems and the continuing physical existence of the Heretaunga Aquifer is a critical requirement of the TANK regulatory approach. New objectives and supporting policies and rules are intended to ensure the ongoing viability of this freshwater aquifer for the wide range of values it currently supports. In particular:</i></p> <ul style="list-style-type: none"> <li><i>a lower allocation limit and the claw back of the total amount of ground water that is allocated thus reducing total abstraction</i></li> <li><i>management of stream depletion effects of connected groundwater when trigger river flows are reached,</i></li> </ul>
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				<p>restricting demand for water when river flows are lowering</p> <ul style="list-style-type: none"> <li>managing the most closely connected groundwater takes as surface water, with minimum flow restrictions applying, further restricting demand for water when rivers are low</li> </ul> <p>All of these measures are designed to protect the aquifer and its connected surface water bodies and ensure the groundwater abstraction is sustainably managed.</p>
<b>Estuary</b>				
Ahuriri Estuary	<p>Cultural, spiritual</p> <p>Ecology</p> <p>Landscape</p> <p>Geology</p>	<p>Te Whanganui a Orotū (Ahuriri Estuary) is a significant wetland along the east coast of New Zealand, with high cultural and ecological value.</p> <p>It provides a wide diversity of habitat and an extremely diverse range of ecological communities, all contained within a relatively small area.</p> <p>Historically, the Tutaekuri and Esk Rivers flowed into Te Whanganui a Orotū which was predominately freshwater and significantly larger in size. In 1931, the Napier earthquake lifted the land by up to two metres and exposed around 1300 hectares of original lagoon. The estuary's unique geological history makes it a nationally important example of tectonic processes.</p> <p>Te Whanganui a Orotū has very important wildlife values, particularly as a feeding and resting area for over 70 species of water birds, some of which are critically endangered and some which migrate every year from the Arctic. It supports the highest diversity of birds in the region.</p> <p>The Estuary has very important native fish values, providing a diverse habitat and is recognised as the most important estuary in the region for fisheries production. It supports the highest diversity of native fish in the region.</p> <p>Te Whanganui-a-Orotū is a place of great cultural and spiritual significance to the Ahuriri Hapū. It is central to their existence and identity. It is named after the ancestor Te Orotū, who was a descendant of the great explorer and ancestor Māhu Tapoanui,</p>		<p>The Plan Change manages the freshwater of the TANK catchments and does not directly manage the estuary, but provides for the integrated management of the effects of fresh water and land use on the estuary using a ki uta ki tai approach.</p> <p>Objective 2 for integrated management</p> <p>Objectives 4 and 10 and Schedule 1 Managing freshwater inputs from Ahuriri catchment so that:</p> <ul style="list-style-type: none"> <li>Ahuriri estuary sediments can be healthy</li> <li>They contribute to the health of the estuary;</li> <li>They contribute 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.</li> </ul> <p>Policy 1, 5 targeted methods and priority to improve quality of freshwater inputs, including as a priority, managing sediment and nutrient load stressors on the estuary and stormwater from urban areas.</p> <p>Policies 18, Rules Schedule 3 and 5 and sediment management</p> <p>Policies 26 – 30 Rules; Stormwater management</p> <p>Policy 31 Recognition and support for wider Ahuriri estuary management planning</p>

		<p>who is the very beginning of the Ahuriri people.</p> <p>Ngāti Pāhauwera and Maungaharuru –Tangitū also have customary linkages to Te Whanganui-ā-Orotu.</p> <p>Moremore is the kaitiaki of Te Whanganui-a- Orotū, and known as the guardian of the people occupying the shores of Te Whanganui-a-Orotū who are his descendants. The appearance of Moremore warned people of dangers and reinforced the customs practiced by the old people. The law of Moremore was always observed.</p> <p>The area around Te Whanganui-a-Orotū was a very important source of food and was heavily populated and the site of a number of significant battles. Consequently, numerous sites of cultural, historic and archaeological significance are situated around what was its shoreline.</p> <p>From the earliest of times it was highly prized for its enormous food resources and its access to major river systems and forest areas. It was known as 'a place of abundance'. Archaeological evidence confirms that Te Whanganui-a-Orotū was an important place to live. Excavations indicate settlement dates between the late fifteenth and early seventeenth centuries, with very early settlement on Roro o Kuri - somewhere between the twelfth and thirteenth centuries. Surrounding the harbour are 11 recorded pā, some extensive in size. Extensive middens exist in this area.</p> <p>The pā at Te Pakake was a communal gathering place in times of trouble. Ngāti Hinepare, Ngāti Mahu, Ngāti Parau, Ngāti Hawea and Ngāti Kurumokihi are all recorded as having occupied the pā when under threat of invasion. Pukemokimoki was a fortified pā, with a canoe landing place near, located at south-western end of Mataruahou (Napier Hill).</p> <p>Tāngata whenua of the region have advised that Te Whanganui a Orotū (Ahuriri Estuary) has outstanding cultural and spiritual values.</p>	<p>Objective 6 schedule 2; recognition of long term approach to water management and managing impacts on estuary ecosystems, including need for more data and better indicators of estuary health as a result of freshwater inputs.</p> <p><b>Commentary</b></p> <p><i>The Ahuriri is currently in a degraded state. The reasons for the degradation are likely to be complex and not all are known with confidence. However, the TANK PC9 addresses freshwater discharges into the estuary, directly from land, or via river systems. Expected improvements in freshwater discharges to the estuary should result in improvement to estuary values.</i></p> <p><i>Objective 4 requires that maintenance of a state (of freshwater water quality) is at the measured state and is not to be degraded. This is consistent with the 'protection' requirement, which equally requires no degradation of the outstanding/significant value from its current state.</i></p> <p><i>The supporting suite of policies and rules, listed above and including for urban stormwater management, all contribute to achieving a healthier estuary environment over time.</i></p> <p><i>The estuary faces a range of other management issues, some of which are beyond the scope of the TANK plan change (e.g. pest management, marine biodiversity, land zoning, natural hazard risk and climate change and sea level rise) and the need for a wider perspective for estuary management is specifically noted.</i></p> <p><i>Wider integrated planning for management of the Ahuriri Estuary and its margins will enable a more holistic response to be developed, alongside Napier City's 'Ahuriri Estuary and Coastal Edge Masterplan' (2018).</i></p> <p><i>HBRC anticipates that the pending review of the Regional Coastal Environment Plan will address identification of the significant values of the Ahuriri Estuary and develop an appropriate regulatory framework for protection of those significant values.</i></p>
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Table 1: Comparison between (draft) PC9 and PC7 policies

Proposed PC 7 OWB Provisions	Given effect in PC 9 TANK by:
<b>POL LW1: Problem solving approach – integrated catchment management</b>	
<b>Proposed RPS Pol LWcC)</b> Assess OWBs in Schedule 25 to determine significant values, including national values in NPS-FM Appendix 1	Undertaken – see Table 2 above, significant values list, except for: <ul style="list-style-type: none"> <li>the Ahuriri Estuary was not assessed as it is within the area covered by the Regional Coastal Environment Plan (which is due for review).</li> </ul>
<b>Proposed RPS Pol LW1 d)</b> Protect outstanding and significant values	PC9 protects outstanding values by seeking the maintenance and improvement of water quality and sets limits and minimum flows to protect quantity.
<b>Proposed RPS Policy LWI dA)</b> Requires maintain and enhance where necessary the water quality of outstanding water bodies and further, seeks the protection of the water quality.	The PC9 approach to water quality is to maintain water quality, and improvement of water quality is sought where specified values require better water quality in order to be better supported or in a better state than they are currently. This is providing a higher level of protection to existing values than required by the OWB policy.
<b>RPS Policy LWI.2 bA) (i)</b> In preparing a regional plan it must identify significant values and the spatial or temporal extent of those values as relevant	The objectives sets out activities that must be managed so that the water quality and quantity is maintained or improved where necessary to enable the needs of the specified range of values to be met. Water management units are provided to show spatially how water quality states apply in relation to direct and diffuse contaminant discharges and how water allocation is to be managed. PC9 takes a 'water management unit' approach to setting and meeting limits and objectives and the extent to which an outstanding value is present in those units, is provided for at an FMU level (except in some cases where specific reaches and upper/lower sections of rivers are identified separately)
<b>RPS Policy LWI.2 bA) (ii)</b> Establish how the outstanding and significant values will be protected by regulatory methods or non-regulatory methods or both.	This is provided for in PC9 as described above for a range of policies and rules that manage water and land use activities.

Proposed PC 7 OWB Provisions	Given effect in PC 9 TANK by:
<b>POL LW1: Problem solving approach – integrated catchment management</b>	
<b>RPS Policy LW1.2 bA) (iii)</b> Include provisions to manage activities in a manner that avoids adverse effects that are more than minor on outstanding and significant values (which is a different standard to 'protect')	PC9 may not be consistent with this policy. The intent of the PC7 provision was to protect outstanding values, however, this policy direction may be interpreted to mean a higher level of protection beyond that provided in the status quo. No more than minor adverse effect is a different direction than protecting values. (see MfE guidance note ref above).  While PC9 includes provisions that protect (maintain and improve) water quality and establish flows and allocation limits to provide for a range of values, including instream values, the cumulative effects of some activities are more than minor on some instream values.
<b>Policy LW2 (c)</b> Priority for protection of values provided. (There is some overlap with Table 1 that will need to be addressed.)	PC 9 is generally consistent with providing for the prioritised values. However, there is overlap/lack of clarity about the way in which priority is described or assigned in the RPS schedule 25 and RPS Table 1.  The TANK Group itself chose to consider all values equally (rather than prioritise) and make decisions about them independently of any significance assessment. The overall effect is that existing instream values, including any of the outstanding ones, will be protected or improved above existing state, while other abstraction values are also provided for at known levels (whether in terms of security of supply or water quality outcomes).
<b>Policy LW3A</b> Provides decision making criteria for activities	This policy requires a consent to be considered in respect of the RPS as well as a regional plan. This is despite the regional plan having developed policies, rules and limits (for activities listed in LW3A.2 that might affect the outstanding values). Discretionary and non-complying can be decided without looking to the RPS if the regional plan has properly given effect to the RPS requirements in respect of the outstanding waterbodies.



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HAWKE'S BAY REGIONAL COUNCIL

**SECTION 32 EVALUATION  
REPORT**

TANK Catchments Plan Change to  
Regional Resource Management Plan  
– Change 9

8 August 2019 (Incomplete Draft)

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## 1. INTRODUCTION

### 1.1 PURPOSE OF REPORT

This report presents the summary evaluation of proposed Plan Change 9 to the Hawke's Bay Regional Resource Management Plan (RRMP), in accordance with Section 32 of the Resource Management Act 1991 (RMA).

### 1.2 PURPOSE OF TANK PROJECT AND PLAN CHANGE

Proposed Plan Change 9 'TANK Catchments' (hereafter referred to as Change 9), incorporates specific objectives, policies and rules for the integrated management of the land and water resources in the TANK catchments. The TANK catchments incorporate the Tūtaekuri River, Ahuriri Estuary, Ngaruroro River and Karamū Stream and all the tributaries to these waterbodies.

Plan Change 9 seeks to provide a regulatory decision making framework for the TANK catchments in conjunction with existing provisions in the regional plan component of the RRMP. No changes are proposed to the Regional Policy Statement (RPS) sections of the RRMP.

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 reflect the collaborative nature of the TANK plan change preparation process and promote community involvement in managing freshwater. (sec 32 report to address where RPS related issues may need resolving)

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.<sup>1</sup>

Plan Change 9 has been drafted in accordance with the requirements of the Resource Management Act (1991) (RMA) and to enable the progressive implementation of the National Policy Statement for Freshwater Management 2014<sup>2</sup> (NPSFM) and to give effect to the RPS<sup>3</sup>.

In accordance with the NPSFM Plan Change 9 has sought to enable the community to identify the values for which the water is to be managed, to adopt objectives in relation to those values and establish methods, including limits to ensure those objectives will be met.

<sup>1</sup> TANK Plan Change, Preamble (page 5).

<sup>2</sup> Amendment Version 2017

<sup>3</sup> As incorporated in Chapters 2 and 3 of the RRMP

### 1.3 GEOGRAPHICAL EXTENT OF TANK CATCHMENT - SUBJECT AREA

Figure 1 below sets out the geographic extent of the Hawke's Bay Region covered by the TANK catchments. It is this area that is the subject of Plan Change 9.



Figure 1 - The TANK Catchments Area<sup>4</sup> Subject to Plan Change 9

<sup>4</sup> TANK Group Terms of Reference updated April 2016, Hawke's Bay Regional Council (page 10).



## 2. STATUTORY REQUIREMENTS OF SECTION 32 EVALUATION

The RMA requires under section 32 that an evaluation be undertaken of any proposed plan, plan change or variation. Section 32 is set out in full as follows:

### **32 Requirements for preparing and publishing evaluation reports**

- (1) *An evaluation report required under this Act must—*
  - (a) *examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of this Act; and*
  - (b) *examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by—*
    - (i) *identifying other reasonably practicable options for achieving the objectives; and*
    - (ii) *assessing the efficiency and effectiveness of the provisions in achieving the objectives; and*
    - (iii) *summarising the reasons for deciding on the provisions; and*
  - (c) *contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal.*
- (2) *An assessment under subsection (1)(b)(ii) must—*
  - (a) *identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for—*
    - (i) *economic growth that are anticipated to be provided or reduced; and*
    - (ii) *employment that are anticipated to be provided or reduced; and*
  - (b) *if practicable, quantify the benefits and costs referred to in paragraph (a); and*
  - (c) *assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.*
- (3) *If the proposal (an **amending proposal**) will amend a standard, statement, regulation, plan, or change that is already proposed or that already exists (an **existing proposal**), the examination under subsection (1)(b) must relate to—*
  - (a) *the provisions and objectives of the amending proposal; and*
  - (b) *the objectives of the existing proposal to the extent that those objectives—*
    - (i) *are relevant to the objectives of the amending proposal; and*
    - (ii) *would remain if the amending proposal were to take effect.*
- (4) *If the proposal will impose a greater prohibition or restriction on an activity to which a national environmental standard applies than the existing prohibitions or restrictions in that standard, the evaluation report must examine whether the*



*prohibition or restriction is justified in the circumstances of each region or district in which the prohibition or restriction would have effect.*

(4A) *If the proposal is a proposed policy statement, plan, or change prepared in accordance with any of the processes provided for in Schedule 1, the evaluation report must—*

- (a) *summarise all advice concerning the proposal received from iwi authorities under the relevant provisions of Schedule 1; and*
- (b) *summarise the response to the advice, including any provisions of the proposal that are intended to give effect to the advice.*

(5) *The person who must have particular regard to the evaluation report must make the report available for public inspection—*

- (a) *as soon as practicable after the proposal is made (in the case of a standard or regulation); or*
- (b) *at the same time as the proposal is publicly notified.*

(6) *In this section—*

**objectives** means —

- (a) *for a proposal that contains or states objectives, those objectives;*
- (b) *for all other proposals, the purpose of the proposal*

**proposal** means *a proposed standard, statement, regulation, plan, or change for which an evaluation report must be prepared under this Act*

**provisions** means,—

- (a) *for a proposed plan or change, the policies, rules, or other methods that implement, or give effect to, the objectives of the proposed plan or change;*
- (b) *for all other proposals, the policies or provisions of the proposal that implement, or give effect to, the objectives of the proposal.*

### 3. STATUTORY BASIS FOR TANK PLAN CHANGE

#### 3.1 PART 2 RMA – PURPOSE AND PRINCIPLES

##### 3.1.1 Section 5 'Purpose'

The purpose of the Resource Management Act 1991 is set out in section 5 as follows:

##### 5. Purpose

- (1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*
- (2) *In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—*
  - (a) *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
  - (b) *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
  - (c) *avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

In terms of section 5(1), the natural and physical resources of the TANK catchments include:

- Natural Resources
  - The rivers and their tributaries that comprise the catchments, including the Ngaruroro, Tūtaekurī, and the Karamu rivers.
  - The Ahuriri Estuary and its catchment streams; and the Waitangi Estuary.
  - Wetlands including Peka Peka.
  - Lake Runanga, Lake Oingo, and Lake Poukawa.
  - The Heretaunga Plains aquifer resource.
  - The Heretaunga Plains land resource.
  - The hill country land resource.
  - The northern Ruahine Range and the Kaweka Range and the indigenous vegetation cover of those landforms.
- Physical Resources



- The Region's largest urban areas: Napier City including Taradale and Bay View; and Hastings, Havelock North, Flaxmere, Clive, Whakatu, Haumoana and Te Awanga within Hastings District.
- Associated Industrial, Commercial and Residential infrastructure services.
- Land developed for commercial primary production including: pastoral farming, forestry, viticulture, horticulture and arable cropping.
- Network Utilities including: roads, electricity transmission infrastructure, telecommunication infrastructure, and urban service infrastructure.

In providing for sustainable management, the above listed natural and physical resources are therefore relevant to Change 9.

Direction is provided through RPS Change 5 as to the specific values of the Freshwater resources within the TANK catchments<sup>5</sup>. These are set out as both primary and secondary values in Policy LW2, Table 1 of Change 5 as follows:

**Table 1 - Values and Uses of TANK Catchments (Change 5, Policy LW2)**

Primary Value(s) and Uses – in no priority order	Secondary Value(s) and Uses – in no priority order
<ul style="list-style-type: none"> <li>• any regionally significant native water bird populations and their habitats</li> <li>• Cultural values and uses for:               <ul style="list-style-type: none"> <li>o mahinga kai</li> <li>o nohoanga</li> <li>o taonga raranga</li> <li>o taonga rongoa</li> </ul> </li> <li>• Fish passage</li> <li>• Individual domestic needs and stock drinking needs</li> <li>• Industrial &amp; commercial water supply</li> <li>• Native fish habitat in the Ngaruroro River and Tutaekuri River catchments</li> <li>• Recreational trout angling and trout habitat in:               <ul style="list-style-type: none"> <li>o the Mangaone River</li> <li>o the Mangatutu Stream</li> <li>o the Ngaruroro River and tributaries upstream of Whanawhana cableway</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Aggregate supply and extraction in Ngaruroro River downstream of the confluence with the Mangatahi Stream</li> <li>• Amenity for contact recreation (including swimming) in lower Ngaruroro River, Tutaekuri River and Ahuriri Estuary</li> <li>• any locally significant native water bird populations and their habitats</li> <li>• Native fish habitat, notwithstanding native fish habitat as a primary value and use in the Tutaekuri River and Ngaruroro River catchments</li> <li>• Recreational trout angling, where not identified as a primary value and use</li> <li>• Trout habitat, where not identified as a primary value and use</li> </ul>

<sup>5</sup> Referred to in Change 5 as the Greater Heretaunga / Ahuriri Catchment Area.



Primary Value(s) and Uses – in no priority order	Secondary Value(s) and Uses – in no priority order
<ul style="list-style-type: none"> <li>o the Ngaruroro River mainstem between the Whanawhana cableway and confluence with the Maraekakaho River</li> <li>o the Tutaekuri River mainstem above the Mangaone River confluence</li> <li>• The high natural character values of the Ngaruroro River and its margins upstream of Whanawhana cableway, including Taruarau River</li> <li>• The high natural character values of the Tutaekuri River and its margins above the confluence of, and including, the Mangatutu Stream</li> <li>• Trout spawning habitat</li> <li>• Urban water supply for cities, and townships and settlements and water supply for key social infrastructure facilities</li> <li>• Freshwater use for beverages, food and fibre production and processing and other land-based primary production</li> </ul>	

In the preparation of Change 9, the TANK Stakeholder Group agreed that all values are equally important in deciding on flows and allocations<sup>6</sup> and that the RRMP through change 9 can and should support these values<sup>7</sup>.

Change 9 seeks to provide for the sustainable management of the freshwater resources within the TANK catchments in a way and at a rate which enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety. Table 1 above helps define the values to be protected and uses to be enabled in providing for the well-being of the people and communities of the TANK catchments.

In providing for sustainable management, Change 9 seeks to:

- sustain the freshwater resource of the TANK catchments to meet the reasonably foreseeable needs of future generations;

<sup>6</sup> Meeting 34, 18 October 2017.

<sup>7</sup> Report 1, 'Interim Agreements' (February 2014).

- safeguard the life supporting capacity of the freshwater resource of the TANK catchments and the soil and ecosystems within those catchments; and
- avoid, remedy or mitigate adverse effects of activities on the environment within the TANK catchments.

In this way Change 9 as a whole seeks to achieve sustainable management. Specific consideration of whether the objectives of Change 9 achieve the purpose of the RMA in section 5, is provided in the section 32 evaluation component of this report below.

### 3.1.2 Section 6 'Matters of National Importance'

Section 6 sets out matters of national importance that must be recognised and provided for in Change 9. Some matters are more relevant than others to a regional plan and the freshwater and integrated management scope of Change 9. The matters of national importance listed under section 6 are:

- (a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- (b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
- (c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- (d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*
- (e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*
- (f) the protection of historic heritage from inappropriate subdivision, use, and development:*
- (g) the protection of protected customary rights:*
- (h) the management of significant risks from natural hazards.*

Of particular relevance to the scope of the TANK plan change are sections 6(a), (c), (e), (g), and (h).

### 3.1.3 Section 7 'Other Matters'

Section 7 of the RMA requires particular regard to be given to:

- (a) kaitiakitanga:*
- (aa) the ethic of stewardship:*
- (b) the efficient use and development of natural and physical resources:*
- (ba) the efficiency of the end use of energy:*
- (c) the maintenance and enhancement of amenity values:*



(d) *intrinsic values of ecosystems:*

(e) *[Repealed]*

(f) *maintenance and enhancement of the quality of the environment:*

(g) *any finite characteristics of natural and physical resources:*

(h) *the protection of the habitat of trout and salmon:*

(i) *the effects of climate change:*

(j) *the benefits to be derived from the use and development of renewable energy.*

All of these matters are relevant to Change 9 to a greater or lesser extent.

### 3.1.4 Section 8 'Treaty of Waitangi'

Section 8 'Treaty of Waitangi' of the RMA is set out as follows:

*In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).*

Hapū with mana whenua have been involved in and contributed to the collaborative process through the TANK Stakeholder Group 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 through the legal decision making framework provided by the Regional Planning Committee and its tangata whenua representation.<sup>8</sup>

The process has meant that the freshwater management provisions take into account the values which tangata whenua hold, including the range and significance of culture and tikanga Māori, historic, economic, recreational and spiritual aspects that water has. It has also enabled an integrated and holistic approach to waterbody 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.

## 3.2 SECTION 30 RMA - REGIONAL COUNCIL FUNCTIONS

Section 30 of the RMA 'Functions of regional councils' is set out as follows:

*(1) Every regional council shall have the following functions for the purpose of giving effect to this Act in its region:*

<sup>8</sup> TANK Plan Change, Preamble (page 5).



(a) the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the natural and physical resources of the region:

(b) the preparation of objectives and policies in relation to any actual or potential effects of the use, development, or protection of land which are of regional significance:

(ba) the establishment, implementation, and review of objectives, policies, and methods to ensure that there is sufficient development capacity in relation to housing and business land to meet the expected demands of the region:

(c) the control of the use of land for the purpose of—

(i) soil conservation:

(ii) the maintenance and enhancement of the quality of water in waterbodies and coastal water:

(iii) the maintenance of the quantity of water in waterbodies and coastal water:

(iia) the maintenance and enhancement of ecosystems in waterbodies and coastal water:

(iv) the avoidance or mitigation of natural hazards:

(v) [Repealed]

(ca) the investigation of land for the purposes of identifying and monitoring contaminated land:

(d) in respect of any coastal marine area in the region, the control (in conjunction with the Minister of Conservation) of—

(i) land and associated natural and physical resources:

(ii) the occupation of space in, and the extraction of sand, shingle, shell, or other natural material from, the coastal marine area, to the extent that it is within the common marine and coastal area:

(iii) the taking, use, damming, and diversion of water:

(iv) discharges of contaminants into or onto land, air, or water and discharges of water into water:

(iva) the dumping and incineration of waste or other matter and the dumping of ships, aircraft, and offshore installations:

(v) any actual or potential effects of the use, development, or protection of land, including the avoidance or mitigation of natural hazards:

(vi) the emission of noise and the mitigation of the effects of noise:

(vii) activities in relation to the surface of water:

(e) the control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any waterbody, including—

(i) the setting of any maximum or minimum levels or flows of water:

(ii) the control of the range, or rate of change, of levels or flows of water:



- (iii) the control of the taking or use of geothermal energy:
- (f) the control of discharges of contaminants into or onto land, air, or water and discharges of water into water:
- (fa) if appropriate, the establishment of rules in a regional plan to allocate any of the following:
- (i) the taking or use of water (other than open coastal water):
- (ii) the taking or use of heat or energy from water (other than open coastal water):
- (iii) the taking or use of heat or energy from the material surrounding geothermal water:
- (iv) the capacity of air or water to assimilate a discharge of a contaminant:
- (fb) if appropriate, and in conjunction with the Minister of Conservation,—
- (i) the establishment of rules in a regional coastal plan to allocate the taking or use of heat or energy from open coastal water:
- (ii) the establishment of a rule in a regional coastal plan to allocate space in a coastal marine area under Part 7A:
- (g) in relation to any bed of a waterbody, the control of the introduction or planting of any plant in, on, or under that land, for the purpose of—
- (i) soil conservation:
- (ii) the maintenance and enhancement of the quality of water in that waterbody:
- (iii) the maintenance of the quantity of water in that waterbody:
- (iv) the avoidance or mitigation of natural hazards:
- (ga) the establishment, implementation, and review of objectives, policies, and methods for maintaining indigenous biological diversity:
- (gb) the strategic integration of infrastructure with land use through objectives, policies, and methods:
- (h) any other functions specified in this Act.
- (2) A regional council and the Minister of Conservation must not perform the functions specified in subsection (1)(d)(i), (ii), and (vii) to control the taking, allocation or enhancement of fisheries resources for the purpose of managing fishing or fisheries resources controlled under the Fisheries Act 1996.
- (3) However, a regional council and the Minister of Conservation may perform the functions specified in subsection (1)(d) to control aquaculture activities for the purpose of avoiding, remedying, or mitigating the effects of aquaculture activities on fishing and fisheries resources.
- (4) A rule to allocate a natural resource established by a regional council in a plan under subsection (1)(fa) or (fb) may allocate the resource in any way, subject to the following:
- (a) the rule may not, during the term of an existing resource consent, allocate the amount of a resource that has already been allocated to the consent; and



(b) nothing in paragraph (a) affects section 68(7); and

(c) the rule may allocate the resource in anticipation of the expiry of existing consents; and

(d) in allocating the resource in anticipation of the expiry of existing consents, the rule may—

(i) allocate all of the resource used for an activity to the same type of activity; or

(ii) allocate some of the resource used for an activity to the same type of activity and the rest of the resource to any other type of activity or no type of activity; and

(e) the rule may allocate the resource among competing types of activities; and

(f) the rule may allocate water, or heat or energy from water, as long as the allocation does not affect the activities authorised by section 14(3)(b) to (e).

(5) In this section and section 31,—

**business land** means land that is zoned for business use in an urban environment, including, for example, land in the following zones:

(a) business and business parks;

(b) centres, to the extent that this zone allows business uses;

(c) commercial;

(d) industrial;

(e) mixed use, to the extent that this zone allows business uses;

(f) retail

**development capacity**, in relation to housing and business land in urban areas, means the capacity of land for urban development, based on—

(a) the zoning, objectives, policies, rules, and overlays that apply to the land under the relevant proposed and operative regional policy statements, regional plans, and district plans; and

(b) the capacity required to meet—

(i) the expected short and medium term requirements; and

(ii) the long term requirements; and

(c) the provision of adequate development infrastructure to support the development of the land

**development infrastructure** means the network infrastructure for—

(a) water supply, wastewater, and storm water; and

(b) to the extent that it is controlled by local authorities, land transport as defined in section 5(1) of the Land Transport Management Act 2003.

Plan Change 9 is specifically relevant to the functions set out under section 30(1)(a), (b), (ba), (c), (e), (f), and (fa) in establishing objectives, policies and methods to:

- achieve integrated management of natural and physical resources of the TANK catchments;
- manage actual or potential effects of regional significance in the use, development or protection of land in the TANK catchments;
- ensure that there is sufficient development capacity in relation to housing and business land within the TANK catchments to meet the expected demands of the region (this is addressed by section 3.1B of the RRMP, with the relevance of Change 9 only relating to the taking of water from within and the discharge of stormwater into, the TANK catchments in the provision of development infrastructure for housing and business land);
- control the use of land in the TANK catchments for the purpose of: soil conservation, the maintenance and enhancement of the quality of water in the waterbodies, the maintenance of the quantity of water in waterbodies, the maintenance and enhancement of ecosystems in waterbodies, and the avoidance or mitigation of natural hazards;
- The control of the taking, use, damming and diversion of water, and the control of the quantity, level, and flow of water in the waterbodies of the TANK catchments;
- Within the TANK catchments, the control of the discharges of contaminants into or onto land or water and discharges of water into water; and
- The establishment of rules in a regional plan to allocate the taking or use of water in the TANK catchments subject to section 30(4).

### 3.3 PART 5 RMA – SECTIONS 63 – 70 REGIONAL PLANS

Section 63 'Purpose of regional plans' sets out that a plans purpose is to assist a regional council to carry out its functions<sup>9</sup> in order to achieve the purpose of the RMA. Change 9 is consistent with the functions of a regional council under section 30 of the RMA and seeks to achieve the purpose of the RMA. An assessment of how the objectives of Change 9 achieve the purpose of the RMA is provided under section 7.1 of this report below.

Sections 64 and 64A are not relevant to Change 9 as they apply only to regional coastal plans.

Section 65 'Preparation and change of other regional plans' sets out that a plan must be prepared in accordance with Schedule 1, which sets out the statutory process for undertaking consultation in preparing a plan change and then the requirements for public notification and the making and hearing of submissions and further submissions. Section

<sup>9</sup> As listed in section 30 of the RMA and set out under section 3.2 of this report.



65(3) allows a regional council to prepare a regional plan (or plan change) at any time, but requires consideration of preparing a plan change when specified circumstances arise, including (g) the implementation of a national policy statement. In the case of Change 9, the implementation of the National Policy Statement for Freshwater Management 2014 (as amended in 2017) is a key component.

Section 65(6) states that a regional plan must be amended to give effect to a regional policy statement (RPS), if the statement contains a provision to which the plan does not give effect. Change 5 'Land Use and Freshwater Management'<sup>10</sup> to the RPS includes Policies:

*LW1.1 Adopt an integrated approach to freshwater and the effects of land use and development within each catchment area, that...*

*LW1.2 When preparing regional plans:*

*a) use the catchment-wide integrated management approach set out in POL LW1.1; and*

*b) identify the values for freshwater and their spatial extent within each catchment and for catchments identified in Policy LW2.1:*

*(i) the values must include those identified in Table 1<sup>11</sup>;*

*(ii) may include additional values*

*LW2.1 Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3:*

*(a) Greater Heretaunga / Ahuriri Catchment Area<sup>12</sup>...*

*LW2 (3) When managing the freshwater bodies listed in Policy LW2.1:*

*a) recognise and provide for primary values and uses identified in Table 1; and*

*b) have particular regard to the secondary values and uses identified in Table 1.*

As a result of Change 5<sup>13</sup> to the RPS, a change to the regional plan is required to insert provisions relating to a catchment wide integrated management approach for the Greater Heretaunga / Ahuriri Catchment area to recognise and provide for the values of that catchment identified in Table 1. That catchment area incorporates the Tūtaekurī River, Ahuriri Estuary, Ngaruroro River and Karamū River catchments now known collectively as

<sup>10</sup> Updated as at 27 March 2015

<sup>11</sup> Table 1 is listed in section 3.1.1 of this report as 'Table 1'

<sup>12</sup> Being the catchments referred to as TANK in Change 9

<sup>13</sup> Change 5 is still to be made operative due to an appeal of confined scope relating to wetlands remaining unresolved.

TANK. A primary purpose of Change 9 is therefore to give effect to policies LW1 and LW2 of the RPS as required by RMA section 65(6).

Section 66 'Matters to be considered by regional council (plans)' requires<sup>14</sup> regional plans to be prepared and changed in accordance with:

- (a) its functions under section 30; and
- (b) the provisions of Part 2; and
- (c) a direction given under section 25A(f); and
- (d) its obligation (if any) to prepare an evaluation report in accordance with section 32; and
- (e) its obligation to have particular regard to an evaluation report prepared in accordance with section 32; and
- (ea) a national policy statement, a New Zealand coastal policy statement, and a national planning standard; and
- (f) any regulations

As has been discussed above Change 9 has been prepared in accordance with the regional council functions under section 30 and the provisions of Part 2. This report is an evaluation report of plan Change 9 under section 32. Consideration of Change 9 against the relevant national policy statements and regulations is explained below in sections 3.4 and 3.5 of this report. The national planning standards have yet to come into effect so cannot be considered.

Section 66(2) requires regard to be had to any proposed regional policy statement in respect of the region. This is relevant given that Change 5 to the RPS still only has the status of a 'proposed regional policy statement' due to the unresolved appeal on the wetlands issue. Section 66(2) therefore provides the statutory basis on which Change 5 can be given regard prior to it becoming operative.

Section 66(2A) states:

*When a regional council is preparing or changing a regional plan, it must deal with the following documents, if they are lodged with the council, in the manner specified, to the extent that their content has a bearing on the resource management issues of the region:*

- (a) the council must take into account any relevant planning document recognised by an iwi authority;

<sup>14</sup> At subsection (f).



The Hawke's Bay Regional Council website includes a page titled 'Iwi Hapu Management Plans'<sup>15</sup>. The following Iwi / Hapu Management Plans relating to the TANK catchments are listed by the Council on this web page:

- *Tūtaekurī Awa Management and Enhancement Plan*, prepared by Ngā Hapū o Tūtaekurī – H Hawaikirangi, TK Hawaikirangi, C Ormsby, 2014.
- *Ngāti Hori Freshwater Resources Management Plan – Operation Patiki*, Kohupatiki Marae, 2012.
- *Mana Ake Ngā Hapū o Heretaunga – An Expression of Kaitiakitanga*, Te Taiwhenua o Heretaunga, 2015 Edition.
- *Kahungunu ki Uta, Kahungunu ki Tai – Marine & Freshwater Fisheries Strategic Plan – Mai Paritu, tai atu ki Turakirae*, Coastal Hapū Collective, Kahungunu Asset Holding Company Limited and Ngāti Kahungunu Iwi Incorporated, 2008

These hapu and iwi management plan documents have been reviewed and taken into account in the preparation of Change 9.

Section 66(3) prevents any regard to be had to trade competition in preparing or changing any regional plan.

Section 67 'Contents of regional plans' requires in subsection (1) that a regional plan must state:

- (a) the objectives for the region; and
- (b) the policies to implement the objectives; and
- (c) the rules (if any) to implement the policies.

Change 9 includes some 16 objectives, as set out in section 7.1 of this report below. These objectives are implemented by 55 policies, which in turn are, implemented by rules. Change 9 therefore includes all of the required contents of regional plans.

Section 67(2) sets out optional contents of regional plans, of which Change 9 includes:

- (a) the issues that the plan seeks to address; and
- (b) the methods, other than rules, for implementing the policies for the region; and...

Many of the remaining matters set out in section 67(2) are already included generally in the RRMP and need not be repeated in Change 9.

Of the remaining parts of Section 67, (3) requires that a regional plan must give effect to:

- (a) any national policy statement; and

<sup>15</sup> <https://www.hbrc.govt.nz/our-council/partnerships/tangata-whenua/iwi-hapu/>

(b) any New Zealand coastal policy statement; and

(ba) a national planning standard; and

(c) any regional policy statement.

The relevant national policy statements are set out under section 3.4 of this report below. Of these Plan Change 9 seeks to in particular give effect to the National Policy Statement for Freshwater Management. As Change 9 relates to the TANK freshwater catchments, the New Zealand Coastal Policy Statement 2010 is of little relevance. Change 9 seeks to give effect to the RPS, and in particular to Change 5 'Land and Freshwater management' of the RPS.

Section 67(4) sets out that a regional plan must not be inconsistent with a water conservation order. There is a Draft Water Conservation Order for the Ngaruroro and Clive Rivers. As a draft it may be subject to change in the final decision, therefore it does not need to be given effect to at this stage.

As at the time of writing, submissions to the Environmental Protection Authority (EPA) on the re-notified<sup>16</sup> and amended application had closed (22 August 2018). Following this, as required by Special Tribunal the TANK group recommendations for the contents of Change 9<sup>17</sup> to the Hawkes Bay Regional Council were provided to the EPA and made publicly available on their website on 31 August 2018.

On 18 September 2018, Version 3 of the Draft Water Conservation Order<sup>18</sup> was submitted to the EPA, as required by the Special Tribunal to address matters raised in consultation

Section 67(5) states that:

*A regional plan must record how a regional council has allocated a natural resource under section 30(1)(fa) or (fb) and (4), if the council has done so.*

Change 9 seeks to allocate the taking or use of water under section 30(1)(fa). Schedule 6 sets out flows, levels and allocation limits for the waterbodies in the TANK Catchments in accordance with section 67(5). Schedule 7 sets out the high flow allocation for specified waterbodies within the TANK catchments.

<sup>16</sup> Recent scientific evidence has confirmed that wider hydraulic connections exist through the Ngaruroro and Clive River catchments, than was understood when the application was first notified. As a result of this new evidence, the Special Tribunal decided that the application should be re-notified., <https://www.epa.govt.nz/public-consultations/in-progress/water-conservation-order-ngaruroro-and-clive-rivers/>

<sup>17</sup> In the form of Draft V&I; TANK Plan Change dated August 2018: <https://www.epa.govt.nz/assets/FileAPI/proposal/NSP000041/Board-minutes-directions-and-correspondence-Correspondence-to-decision-maker/Memorandum-of-Counsel-on-behalf-of-HBRC-regarding-the-TANK-groups-final-recommendations.pdf>

<sup>18</sup> <https://www.epa.govt.nz/assets/FileAPI/proposal/NSP000041/Board-minutes-directions-and-correspondence-Correspondence-to-decision-maker/Memorandum-on-behalf-of-the-Applicants-regarding-version-3.pdf.pdf>

Section 68 'Regional Rules' sets out the basis on which a regional plan may incorporate rules. Section 68(3) states:

*In making a rule, the regional council shall have regard to the actual or potential effect on the environment of activities, including, in particular, any adverse effect.*

The rules in Change 9 must therefore relate to managing the effects of activities on the environment.

Section 68(7) states:

*Where a regional plan includes a rule relating to maximum or minimum levels or flows or rates of use of water, or minimum standards of water quality ..., the plan may state—*

- (a) whether the rule shall affect, under section 130, the exercise of existing resource consents for activities which contravene the rule; and*
- (b) that the holders of resource consents may comply with the terms of the rule, or rules, in stages or over specified periods.*

Some rules in Change 9 require compliance in stages over specified periods.

Section 69 'Rules relating to water quality' requires at subsection (3):

*Subject to the need to allow for reasonable mixing of a discharged contaminant or water, a regional council shall not set standards in a plan which result, or may result, in a reduction of the quality of the water in any waters at the time of the public notification of the proposed plan unless it is consistent with the purpose of this Act to do so.*

The rules of Change 9 must therefore seek to maintain or enhance water quality unless it is justified that it is consistent with the purpose of the RMA (section 5) not to do so.

Section 70 'Rules about discharges' requires:

- (1) Before a regional council includes in a regional plan a rule that allows as a permitted activity—*
  - (a) a discharge of a contaminant or water into water; or*
  - (b) a discharge of a contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water —**the regional council shall be satisfied that none of the following effects are likely to arise in the receiving waters, after reasonable mixing, as a result of the discharge of the contaminant (either by itself or in combination with the same, similar, or other contaminants):*
  - (c) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;*
  - (d) any conspicuous change in the colour or visual clarity;*
  - (e) any emission of objectionable odour;*

(f) the rendering of freshwater unsuitable for consumption by farm animals:

(g) any significant adverse effects on aquatic life.

It is noted that the discharge rules included in Change 9 are generally additions to the existing RRMP rules to be applied to the TANK catchments. The existing RRMP rules have been set in accordance with the relevant provisions of the RMA, including section 70, and the permitted activity standards ensure that the effects listed in section 70(1)(c) – (g) must not result from the discharge.

### 3.4 NATIONAL POLICY STATEMENTS

#### 3.4.1 National Policy Statement for Freshwater Management 2014

The National Policy Statement for Freshwater Management 2014 (NPSFM) has been amended with the amended provisions taking effect in August 2017. References made in this report to the NPSFM are to this latest version.

The NPSFM sets out the objectives and policies for freshwater management under the RMA, which are required to be given effect to by regional policy statements, regional plans and where relevant district plans. The following table lists the objectives by subject heading.

Table 2 – NPSFM List of Objectives

Reference	Objective
AA. Te Mana o te Wai	
Objective AA1	To consider and recognise Te Mana o te Wai in the management of freshwater
A. Water quality	
Objective A1	<p>To safeguard:</p> <p>a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of freshwater; and</p> <p>b) the health of people and communities, as affected by contact with freshwater;</p> <p>in sustainably managing the use and development of land, and of discharges of contaminants.</p>



Reference	Objective
Objective A2	<p>The overall quality of freshwater within a freshwater management unit is maintained or improved while:</p> <ul style="list-style-type: none"> <li>a) protecting the significant values of outstanding freshwater bodies;</li> <li>b) protecting the significant values of wetlands; and</li> <li>c) improving the quality of freshwater in waterbodies that have been degraded by human activities to the point of being over-allocated</li> </ul>
Objective A3	<p>The quality of freshwater within a freshwater management unit is improved so it is suitable for primary contact more often, unless:</p> <ul style="list-style-type: none"> <li>a) regional targets established under Policy A6(b) have been achieved; or</li> <li>b) naturally occurring processes mean further improvement is not possible</li> </ul>
Objective A4	To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quality, within limits.
<b>B. Water quantity</b>	
Objective B1	To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of freshwater, in sustainably managing the taking, using, damming, or diverting of freshwater
Objective B2	To avoid any further over-allocation of freshwater and phase out existing over-allocation.
Objective B3	To improve and maximise the efficient allocation and efficient use of water.
Objective B4	To protect significant values of wetlands and of outstanding freshwater bodies.
Objective B5	To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quantity, within limits.
<b>C. Integrated management</b>	
Objective C1	To improve integrated management of freshwater and the use and development of land in whole catchments, including the interactions

Reference	Objective
	between freshwater, land, associated ecosystems and the coastal environment
CA. National Objectives Framework	
Objective CA1	To provide an approach to establish freshwater objectives for national values, and any other values, that: a) is nationally consistent; and b) recognises regional and local circumstances.
CB. Monitoring plans	
Objective CB1	To provide for an approach to the monitoring of progress towards, and the achievement of, freshwater objectives and the values identified under Policy CA2(b).

As mentioned above, section 67(3)(a) of the RMA requires regional plans to give effect to National Policy Statements. The above listed objectives are implemented by specific policies in the NPSFM. Many of these policies are directive to regional councils making or changing regional policy statements and plans. Such policies are therefore required to be given effect to by Change 9 (if they have not already been given effect to by Change 5 to the RPS).

Objectives A2 and A3 of the NPSFM refer to 'freshwater management units' rather than to the freshwater of a region generally. The NPSFM includes the following definition of freshwater management unit:

*is the waterbody, multiple waterbodies or any part of a waterbody determined by the regional council as the appropriate spatial scale for setting freshwater objectives and limits and for freshwater accounting and management purposes.*

In regard to Change 9, the TANK catchments<sup>19</sup> comprise multiple waterbodies that have been determined by the Hawke's Bay Regional Council via Change 5 to the RPS as an appropriate grouping of catchments to set freshwater objectives for<sup>20</sup>. The TANK catchments are also identified as a priority for maintaining or enhancing the primary values and uses set out in Table 1 of Change 5 when preparing regional plans.

Within Change 9 differentiation is made in the objectives, policies and rules applying to the individual waterbodies within the TANK catchments as is appropriate for maintaining or

<sup>19</sup> Referred to as the 'Greater Heretaunga - Ahuriri Catchment Area' in Change 5 to the RPS, Policy LW2.

<sup>20</sup> It is noted that Change 9 includes the identification of multiple separate FMU's within the TANK catchments.



enhancing the primary values of those waterbodies (in giving effect to Policy CA2 of the NPSFM).

There are many other aspects of the NPSFM that Change 9 is required to give effect to for the freshwater bodies within the TANK catchments. These include recognition of Te Mana o te Wai. NPSFM Policy AA1 b) requires that the setting of freshwater objectives and limits be informed by the values identified through the engagement and discussions with the community, including tangata whenua. The TANK Working Group was the community / tangata whenua engagement mechanism set up to achieve Policy AA1 in regard to Change 9 as is explained further under section 4 of this report below.

Change 9 therefore seeks to give effect to both the NPSFM and the RPS (Change 5) in relation to the TANK catchments.

### 3.4.2 National Policy Statement for Renewable Electricity Generation 2011

The National Policy Statement for Renewable Electricity Generation 2011 (NPSREG) has a single objective stated as follows:

*"To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation."*

The policies of the NPSREG ensure renewable electricity generation, regardless of scale and type, is recognised for its contribution to the well-being of New Zealand.

The following policy of the NPSREG is directive to regional plans and potentially relevant to Change 9 in regard to resources for hydro-electricity generation:

*E. Incorporating provisions for renewable electricity generation activities into regional policy statements and regional and district plans*

*E2 Hydro-electricity resources*

*POLICY E2 Regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for the development, operation, maintenance, and upgrading of new and existing hydro-electricity generation activities to the extent applicable to the region or district.*

*F. Incorporating provisions for small and community-scale renewable electricity generation activities into regional policy statements and regional and district plans*

*POLICY F As part of giving effect to Policies E1 to E4, regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for the development, operation, maintenance and upgrading of small and community-scale distributed renewable electricity*

generation from any renewable energy source to the extent applicable to the region or district.

*G. Enabling identification of renewable electricity generation possibilities*

*POLICY G Regional policy statements and regional and district plans shall include objectives, policies, and methods (including rules within plans) to provide for activities associated with the investigation, identification and assessment of potential sites and energy sources for renewable electricity generation by existing and prospective generators.*

These policies have largely been given effect to by Change 5 to the RPS which includes the following specific provisions (emphasis added):

*OBJ LW1 Integrated management of freshwater and land use and development*

*Freshwater and the effects of land use and development are managed in an integrated and sustainable manner which includes: ...*

*7. recognising the potential national, regional and local benefits arising from the use of water for renewable electricity generation;*

*POL LW1 Problem solving approach - Catchment-based integrated management*

*1. Adopt an integrated management approach to freshwater and the effects of land use and development within each catchment area, that: ...*

*(iD) provides opportunities for new renewable electricity generation infrastructure where the adverse effects on the environment can be appropriately managed;*

*POL LW2 Problem solving approach - Prioritising values*

*Subject to achieving Policy LW1.3: 1. Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3:*

*a) Greater Heretaunga / Ahuriri Catchment Area;*

*b) Mohaka Catchment Area; and*

*c) Tukituki Catchment Area. 1A. Policy LW2.1 applies: a) when preparing regional plans for the catchments specified in Policy LW2.1...*

*3. When managing the freshwater bodies listed in Policy LW2.1*

*a) recognise and provide for the primary values and uses identified in Table 1; and*

*b) have particular regard to the secondary values and uses identified in Table 1.*

Table 1 as referred to in the above Change 5 RPS policy, does not include any primary or secondary values for the Greater Heretaunga / Ahuriri Catchment Area (being the TANK catchments) that refer to renewable electricity generation. The secondary values for the Mohaka Catchment Area in Table 1 however include: *Water use for renewable electricity generation in areas not restricted by the Water Conservation Order*. Similarly, the secondary values for the Tukituki Catchment Area in Table 1 include: *Water use for renewable electricity generation in the Tukituki River (mainstream) and the Waipawa River above SH50 including the Mākaroro River*.



The RPS (via Change 5) therefore includes an objective, LW1(7) and a Policy, LW1(iD), that provides opportunity for hydroelectricity generation where the effects can be appropriately managed. Then in setting the values for specific catchments, hydroelectricity generation is provided for as a secondary value in the Mohaka and Tukituki catchments but not in the TANK catchments. The NPSREG has been provided for at a region wide level with specific consideration given to where hydro electricity generation can be accommodated in a manner where adverse effects on the environment can be appropriately managed.

Despite hydroelectricity generation not being identified as a value within the TANK catchments, Policy 52, under the heading 'Water Augmentation and Conservation – High Flow Allocation Regime' does provide for renewable electricity generation to be considered in regard to water storage and augmentation schemes as follows (emphasis added):

*The Council will also 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 in affected waterbodies*
- b) whether water availability is improved or the level to which the security of supply for water users is enhanced*
- c) whether the proposal 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 waterbodies at times of low flows provided through releases from storage or the dam.*
- e) The 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*

Therefore, regard has been given to opportunities for renewable electricity generation in the RPS (Change 5), but particular catchments have been identified as having appropriate attributes and values for hydro electricity generation and this does not include the TANK catchments. Nevertheless, through Policy 52, of Change 9 opportunity for renewable electricity generation is provided for in relation to water storage and augmentation schemes that can be accommodated in accordance with the other policies and rules of Change 9.



### 3.4.3 New Zealand Coastal Policy Statement 2010

The New Zealand Coastal Policy Statement 2010 (NZCPS) is specifically relevant to the Regional Coastal Environment Plan. It does however have some relevance to Change 9 insofar as each of the TANK catchments flow into the coastal marine area via the Ahuriri and Waitangi estuaries, which are within the coastal environment.

Relevant objectives of the NZCPS to Change 9 are considered to be:

#### Objective 1

*To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land, by:*

- *maintaining or enhancing natural biological and physical processes in the coastal environment and recognising their dynamic, complex and interdependent nature;*
- *protecting representative or significant natural ecosystems and sites of biological importance and maintaining the diversity of New Zealand's indigenous coastal flora and fauna; and*
- *maintaining coastal water quality, and enhancing it where it has deteriorated from what would otherwise be its natural condition, with significant adverse effects on ecology and habitat, because of discharges associated with human activity.*

#### Objective 3

*To take account of the principles of the Treaty of Waitangi, recognise the role of tangata whenua as kaitiaki and provide for tangata whenua involvement in management of the coastal environment by:*

- *recognising the ongoing and enduring relationship of tangata whenua over their lands, rohe and resources;*
- *promoting meaningful relationships and interactions between tangata whenua and persons exercising functions and powers under the Act;*
- *incorporating mātauranga Māori into sustainable management practices; and*
- *recognising and protecting characteristics of the coastal environment that are of special value to tangata whenua.*

#### Objective 6

*To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development, recognising that:*

- *the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits;*



- *some uses and developments which depend upon the use of natural and physical resources in the coastal environment are important to the social, economic and cultural wellbeing of people and communities;*
- *functionally some uses and developments can only be located on the coast or in the coastal marine area;*
- *the coastal environment contains renewable energy resources of significant value;*
- *the protection of habitats of living marine resources contributes to the social, economic and cultural wellbeing of people and communities;*
- *the potential to protect, use, and develop natural and physical resources in the coastal marine area should not be compromised by activities on land;*
- *the proportion of the coastal marine area under any formal protection is small and therefore management under the Act is an important means by which the natural resources of the coastal marine area can be protected; and*
- *historic heritage in the coastal environment is extensive but not fully known, and vulnerable to loss or damage from inappropriate subdivision, use, and development.*

These relevant objectives and the associated policies of the NZCPS are therefore required to be given effect to by that part of Change 9 relating to the coastal environment. That being the freshwater coastal water interface. While the primary purpose of Change 9 relates to giving effect to the NPSFM and Change 5 'Land and Freshwater Management' this coastal interface means that the NZCPS has relevance. It is noted that objective 12 and policy 18 of Change 9 specifically seek to manage effects on the coastal environment in a manner that gives effect to objectives 1, 3 & 6.

### 3.5 NATIONAL ENVIRONMENTAL STANDARDS

#### 3.5.1 National Environmental Standard for Sources of Human Drinking Water 2007

The National Environmental Standard (NES) for Sources of Human Drinking Water seeks to reduce the risk of drinking water sources being contaminated, including rivers and groundwater. It requires councils to ensure effects on drinking water sources are considered in decisions on resource consents. It also requires councils to consider the effect of permitted activity rules as they apply upstream of "a registered drinking-water supply that provides no fewer than 501 people with drinking water for not less than 60 days each calendar year."<sup>21</sup>

<sup>21</sup> Regulation 9, Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007.



This is relevant insofar as the public reticulated drinking water supplies that service the greater Napier and Hastings urban areas are sourced from the Heretaunga Aquifer within the TANK catchments.

Regulation 10 of the Drinking Water NES sets out the limitations on permitted activity rules applying upstream of abstraction points for drinking water (including upstream of the Heretaunga Plains Aquifer) and is as follows:

*10 Limitations on permitted activity rules for activities upstream of abstraction points*

*(1) A regional council must not include a rule or amend a rule in its regional plan to allow a permitted activity, under section 9, 13, 14, or 15 of the Act, upstream of an abstraction point where the drinking water concerned meets the health quality criteria unless satisfied that the activity is not likely to—*

*(a) introduce or increase the concentration of any determinands in the drinking water so that, after existing treatment, it no longer meets the health quality criteria; or*

*(b) introduce or increase the concentration of any aesthetic determinands in the drinking water so that, after existing treatment, it contains aesthetic determinands at values exceeding the guideline values.*

*(2) A regional council must not include a rule or amend a rule in its regional plan to allow a permitted activity, under section 9, 13, 14, or 15 of the Act, upstream of an abstraction point where the drinking water concerned is not tested in accordance with the compliance monitoring procedures in the Drinking-water Standard unless satisfied that the activity is not likely to—*

*(a) increase the concentration of any determinands in the water at the abstraction point by more than a minor amount; or*

*(b) introduce or increase the concentration of any aesthetic determinands in the drinking water, so that, after existing treatment, it contains aesthetic determinands at values exceeding the guideline values.*

*(3) A regional council must not include a rule or amend a rule in its regional plan to allow a permitted activity, under section 9, 13, 14, or 15 of the Act, upstream of an abstraction point where the drinking water concerned does not meet the health quality criteria unless satisfied that the activity is not likely to—*

*(a) increase, by more than a minor amount, the concentration of any determinands in the water at the abstraction point that in the drinking water already exceed the maximum acceptable values for more than the allowable number of times as set out in table A1.3 in Appendix 1 of the Drinking-water Standard; or*

*(b) increase the concentration of any determinands in the water at the abstraction point that in the drinking water do not exceed the maximum acceptable values for more than the allowable number of times as set out in table A1.3 in Appendix 1 of the Drinking-water Standard to the extent that the drinking water, after existing treatment, exceeds the maximum acceptable values for more than the allowable number of times as set out in the table in relation to those determinands; or*



*(c) introduce or increase the concentration of any aesthetic determinands in the drinking water so that, after existing treatment, it contains aesthetic determinands at values exceeding the guideline values.*

Section 66(1)(1) RMA requires that a regional council must prepare and change any regional plan in accordance with – any regulations (amongst other matters). This therefore includes the Drinking Water NES and in particular, regulation 10 of that NES as set out above.

Of particular relevance to Change 9 is that the Registered Drinking Water supplies for Hastings Urban (including Hastings, Havelock North, Flaxmere, Bridge Pa, serving a population of 64,764 people; Napier City, serving a population of 50,804 people; and Clive serving a population of 560 people<sup>22</sup>; are all subject to re 10 of this NES. Specific assessment relating to the proposed Source Protection Zone (SPZ) provisions in Change 9, is provided in section x of this report below.

### 3.5.2 National Environmental Standards for Plantation Forestry 2017

The objectives of the National Environmental Standards for Plantation Forestry (NES-PF) are to<sup>23</sup>:

- maintain or improve the environmental outcomes associated with plantation forestry activities nationally
- increase certainty and efficiency in the management of plantation forestry activities.

This NES introduces permitted, controlled, restricted discretionary and discretionary activities relating to plantation forestry that regional councils are required to administer. Regulation 6 of the NES for Plantation Forestry sets out the circumstances when a rule in a plan may be more stringent than the regulations within the NES. Of relevance to the Plan Change 9 these circumstances include:

- If the rule gives effect to an objective developed to give effect to the National Policy Statement for Freshwater Management (Regulation 9(1)(a));
- If the rule manages any activities conducted within 1km upstream of the abstraction point of a drinking water supply for more than 25 people where the water take is from a waterbody (Regulation 9(3)(c));

<sup>22</sup> Figures obtained from 'Drinking Water Source Protection – Draft Regulatory Provisions for TANK Catchments', Good Earth Matters, 14 June 2018 (page 7).

<sup>23</sup> <http://www.mfe.govt.nz/land/acts-and-regulations/national-environmental-standards-plantation-forestry/about-standards>

- If the rule manages any forestry quarrying activities conducted over a shallow water table (less than 30 m below ground level) that is above an aquifer used for a human drinking water supply (Regulation 9(3)(d));

The option is therefore available for Change 9 to include rules managing the effects of forestry activities on freshwater resources in regard to these circumstances.

### 3.6 RELEVANT PLANNING DOCUMENTS RECOGNISED BY AN IWI AUTHORITY

As set out under section 3.3 above there are four documents listed on the Council's Iwi / Hapu Management Plans web page that are relevant to the TANK catchments, these being:

- *Tūtaekurī Awa Management and Enhancement Plan*, prepared by Ngā Hapū o Tūtaekurī – H Hawaikirangi, TK Hawaikirangi, C Ormsby, 2014.
- *Ngāti Hori Freshwater Resources Management Plan – Operation Patiki*, Kohupatiki Marae, 2012.
- *Mana Ake Ngā Hapū o Heretaunga – An Expression of Kaitiakitanga*, Te Taiwhenua o Heretaunga, 2015 Edition.
- *Kahungunu ki Uta, Kahungunu ki Tai – Marine & Freshwater Fisheries Strategic Plan – Mai Paritu, tai atu ki Turakirae*, Coastal Hapū Collective, Kahungunu Asset Holding Company Limited and Ngāti Kahungunu Iwi Incorporated, 2008

A brief summary of each of these documents is set out in Table 3 below:

**Table 3 – Summary of Relevant Hapu / Iwi Management Plans**

Relevant Management Plan	Summary
<i>Tūtaekurī Awa Management and Enhancement Plan</i>	<p>The purpose of this plan is set out on page 8 as follows:</p> <p><i>The purpose of this plan is to identify and describe the views and intentions of the Tūtaekurī awa Hapū and our aspirations for the Tūtaekurī awa in the future. Ngā Hapū o Tūtaekurī formulated this management and enhancement plan to set direction for ourselves as tangata whenua on the matters we see as needing to be addressed for Tūtaekurī awa. This plan is intended to be a living document, recognising possible changes and addition as situations may alter. The area in which this plan is relevant encompasses the region and resources which can affect the mauri, of the current and historical path of the Tūtaekurī awa. Parts of this plan will be included in the Hawke's Bay Regional Council's Tūtaekurī Ecological Management and Enhancement Plan. This plan is also intended to be used within and by the community, territorial authorities, government and non-</i></p>



Relevant Management Plan	Summary
	<p>government organisations that may have influence over the mauri of our awa. Ngā Hapū o Tūtaekurī seek to work in partnership with the HBRC and/or other parties to achieve the aspirations and further research needed to undertake in order to enhance the mauri of the Tūtaekurī awa. Ngā Hapū o Tūtaekurī has a key role to exercise kaitiakitanga of this taonga as we are the authoritative ancestral voice of Tūtaekurī. This role is provided for in the Resource Management Act 1991 where we as tangata whenua are responsible for ensuring the purpose of this Act being the protection and development of natural resources is administered.</p>
Ngāti Hori Freshwater Resources Management Plan	<p>The purpose of this document is set out on page 2 as follows:</p> <p><i>This document presents Ngāti Hori's priorities and objectives in relation to freshwater. This document will play an important part in achieving our aspirations for freshwater in our Rohe. It provides a foundation for our planning for freshwater and represents a continuous process of management, from past to current times, of the Karamu Stream and its resources.</i></p> <p><i>This plan is also designed in large part to influence the regional policy on freshwater and flows, including the Karamu Stream Enhancement Plan. It is hoped that the Hawkes Bay Regional Council will take this plan, and any other related future documents, into account when they are changing or making plans in relation to freshwater. In particular, we expect that this document and the plan that it envisions will be taken into consideration as Hawkes Bay Regional Council proceeds with its current Karamu Catchment Enhancement Plan.</i></p>
Mana Ake Ngā Hapū o Heretaunga – An Expression of Kaitiakitanga	<p>The intended uses of this document are set out on page 4 as follows:</p> <p><i>Mana Ake, An Expression of Kaitiakitanga is a living document; an expression of kaitiakitanga and hapū best practice, designed to assist marae and hapū to manage their natural resources, and to assist others in understanding tangata whenua values and policies in this regard.</i></p> <p><i>It is also to provide clarity to plan users and decision-makers on what the Treaty principles are that need to be taken into account pursuant to Section 8 of the Resource Management Act (RMA) 1991.</i></p>

Relevant Management Plan	Summary
	<p><i>It is the expectation of hapū that Mana Ake, An Expression of Kaitiakitanga be incorporated into local and regional strategic and annual plans. Key to its success will be an effective relationship with local, regional, and national agencies.</i></p> <p><i>Of particular importance will be that ngā whāinga o ngā hapū (goals and objectives), are being worked towards, and that stakeholders understand the need to progress the aspirations and values held by ngā hapū o Heretaunga.</i></p>
<p><i>Kahungunu ki Uta, Kahungunu ki Tai – Marine &amp; Freshwater Fisheries Strategic Plan – Mai Poritu, tai atu ki Turakirae</i></p>	<p>This strategy document relates to both marine and freshwater fisheries over the whole Kahungunu rohe including the TANK catchments. The executive summary on page 5 sets out the purpose of the document as follows:</p> <p><i>This Strategy sets out the aspirations of Kahungunu for the use and management of marine and freshwater fisheries within our rohe. These groups have come together because, despite the efforts of many within Kahungunu over many years, they are concerned about the current state of fisheries and ecosystems within the rohe and some of the practices of agencies responsible for managing them. The Strategy prioritises localised management in accordance with tikanga and supports the mana of hapū in this respect. It also provides a framework for hapū and other groups within the iwi to work together, and to engage with other stakeholders, agencies and the wider community.</i></p> <p><i>The Strategy will be implemented by working together and operating according to consensus, but without any group imposing their priorities or ideas on others. The aim is to provide greater integration of our interests – commercial and non-commercial, hapū and iwi. It is hoped that this integration can be effectively achieved within three years, though bringing about real changes in the health and abundance of fisheries in the rohe will take much longer, and will require the cooperation of other fishing sectors and others in the wider community.</i></p> <p><i>The vision described by this Strategy – kaitiakitanga o ngā rawa a Tangaroa mo ngā uri whakatupu (guardianship of Tangaroa's multitudes on behalf of all the generations yet to come) – is an ambitious one and a great deal of work will be required in order to realise it.</i></p>



### 3.7 REGIONAL POLICY STATEMENT

The Hawke's Bay Regional Resource Management Plan (Operative August 2006) (the 'RRMP') is a combined regional policy statement (the RPS) and regional plan for the Hawke's Bay Region. The RRMP therefore comprises the RPS and regional plan that apply to the TANK catchments.

Change 5 'Land and Water Management' to the RRMP has the intent of seeking that decisions be made in an integrated manner in regard to the sustainable management of the regions land and water resources. Change 5 is not yet operative but all of its provisions aside from the definition of 'wetland' are beyond the point of legal challenge.

As set out in 3.1.1 and Table 1 above, Policy LW2, Table 1 of Change 5 sets out the primary and secondary values of the TANK Catchments.

Change 5 includes three objectives. As Change 5 forms part of the regional policy statement, it is required to be 'given effect to' by relevant regional plan changes. Change 9 seeks to implement and give effect to Change 5 for the TANK catchments. It is therefore appropriate to list the objectives of Change 5 of relevance. These are as follows:

*OBJ LW 1 Integrated management of freshwater and land use and development  
Freshwater and the effects of land use and development are managed in an  
integrated and sustainable manner which includes:*

- 1. protecting the quality of outstanding freshwaterbodies in Hawke's Bay;*
- 1A. protecting the significant values of wetlands<sup>24</sup>;*
- 2. the maintenance of the overall quality of freshwater within the Hawke's Bay region and the improvement of water quality in waterbodies that have been degraded to the point that they are over-allocated;*
- 2B. establishing where over-allocation exists, avoiding any further over-allocation of freshwater and phasing out existing over-allocation;*
- 3. recognising that land uses, freshwater quality and surface water flows can impact on aquifer recharge and the coastal environment;*
- 4. safeguarding the life-supporting capacity and ecosystem processes of freshwater, including indigenous species and their associated freshwater ecosystems;*
- 5. recognising the regional value of freshwater for human and animal drinking purposes, and for municipal water supply;*
- 6. recognising the significant regional and national value of freshwater use for production and processing of beverages, food and fibre;*
- 7. recognising the potential national, regional and local benefits arising from the use of water for renewable electricity generation;*

<sup>24</sup> This provision is subject to the outstanding appeal on Change 5



8. recognising the benefits of industry good practice to land and water management, including audited self-management programmes;

8A. recognising the role of afforestation in sustainable land use and improving water quality;

9. ensuring efficient allocation and use of water;

12<sup>25</sup>. recognising and providing for river management and flood protection activities;

13. recognising and providing for the recreational and conservation values of freshwaterbodies; and

14. promoting the preservation of the natural character of the coastal environment, and rivers, lakes and wetlands, and their protection from inappropriate subdivision, use and development.

OBJ LW2 Integrated management of freshwater and land use development.

The management of land use and freshwater use that recognises and balances the multiple and competing values and uses of those resources within catchments.

Where significant conflict between competing values or uses exists or is foreseeable, the regional policy statement and regional plans provide clear priorities for the protection and use of those freshwater resources.

OBJ LW3 Tangata whenua values in management of land use and development and freshwater.

Tangata whenua values are integrated into the management of freshwater and land use and development including:

a) recognising the mana of hapu, whanau and iwi when establishing freshwater values; and

b) recognising the cumulative effects of land use on the coastal environment as recognised through the Ki uta ki Tai ('mountains to the sea') philosophy; and

c) recognising and providing for waiuatanga and the mauri of freshwaterbodies in accordance with the values and principles expressed in Chapter 1.6, Schedule 1 and the objectives and policies in Chapter 3.14 of this Plan; and

d) recognising in particular the significance of indigenous aquatic flora and fauna to tangata whenua.

In implementing these objectives, as set out under section 3.3 of this report above, Change 5 'Land Use and Freshwater Management'<sup>26</sup> to the RPS includes policies requiring:

- › An integrated approach to freshwater and the effects of land use within each catchment area (LW1.1);

<sup>25</sup> The numbering of Objective LW1 has been amended through the appeal process resulting in the jump from 9 – 12.

<sup>26</sup> Updated as at 27 March 2015



- Use of a catchment wide approach to identify values for freshwater within each catchment identified in Policy LW2.1 (LW1.2);
- Maintenance, and enhancement where appropriate, of the primary values and uses of freshwaterbodies in Table 1 for the following catchment areas: Greater Heretaunga / Ahuriri Catcment Area<sup>27</sup>...; and
- When managing the freshwater bodies listed (which include the Greater Heretaunga / Ahuriri catchment area) recognise and provide for the primary values and uses identified in Table 1 and to have particular regard to the secondary values identified.

Change 9 is therefore required to insert provisions relating to a catchment wide integrated management approach for the Greater Heretaunga / Ahuriri catchment area into the RRMP. In doing so Change 9 is required to recognise and provide for the values of the Greater Heretaunga / Ahuriri Catchment (now referred to as TANK) identified in Table 1.

The existing RPS section of the RRMP includes other objectives and policies of relevance to Change 9 including<sup>28</sup>:

*OBJ 21 No degradation of existing groundwater quality in the Heretaunga Plains and Ruataniwha Plains aquifer systems.*

*OBJ 22 The maintenance or enhancement of groundwater quality in aquifers in order that it is suitable for human consumption and irrigation without treatment, or after treatment where this is necessary because of the natural water quality.*

*OBJ 25 The quantity of water in wetlands, rivers and lakes suitable for sustaining aquatic ecosystems, for achieving other freshwater objectives, and ensuring resource availability for a variety of purposes across the region, while recognising the impact caused by climatic fluctuations in Hawke's Bay.*

*OBJ 27 The water quality in rivers, lakes and wetlands is suitable for sustaining or improving aquatic ecosystems, and for other freshwater objectives identified in accordance with a catchment-based process as set out in Policy LW1 and Policy LW2, including contact recreation purposes where appropriate.*

*OBJ 27A Riparian vegetation on the margins of rivers, lakes and wetlands is maintained or enhanced in order to:*

- a) maintain biological diversity;*
- b) maintain and enhance water quality and aquatic ecosystems; and*
- c) support the use of surface water resources in accordance with tikanga Māori.*

<sup>27</sup> Being the catchments referred to as TANK in Change 9

<sup>28</sup> The objectives quoted are as amended by Change 5.



## 4. COMMUNITY ENGAGEMENT PROCESS

### 4.1 TANK COLLABORATIVE PROCESS

The process used by HBRC to prepare this Plan Change has been a community based collaborative approach dependent on 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 input of tangata whenua to develop the recommendations leading to this Plan Change.<sup>29</sup>

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.

### 4.2 TANK GROUP MEMBERS

The TANK Group was made up of nominated representatives from a range of sectors. These included:

- Industry groups - e.g. forestry, horticulture, agriculture, viticulture
- NGO's - e.g. Royal Forest and Bird Protection Society, Fish and Game, Federated Farmers
- Tangata Whenua
- Councils
- Government Departments

Five working Groups were established within the TANK Group to work on five topic areas: community engagement, stormwater, wetlands/lakes, mana whenua, economic assessment.

### 4.3 TERMS OF REFERENCE

The purpose of the TANK Group Terms of Reference is to describe and update the Context, Role and Operating Procedures for the TANK Group and was originally adopted in 2012 and updated as the process evolved.

The Terms of Reference provided the groups with guidance as to the roles of the participants and protocol for the process. It also set out the Work Programme in the following four phases.

<sup>29</sup> TANK Plan Change, Preamble (page 5).



Table 4 - TANK Work Programme

Phase	Tasks	Timeframe
Phase 1	<u>Interim Agreements</u> Identification of the values, objectives, and general agreements on approaches for developing policy options for a plan change.	Oct 12 to Dec 13
Phase 2	<u>Policy Development</u> Agreement on objectives, attributes and desired attribute states for management of water bodies	April 16 to Nov 17 (Meetings 19 to 33)
Phase 3	<u>Drafting</u> Input to plan change drafting	Feb 18 to Dec 18
Phase 4	Involvement post Council adoption	

#### 4.4 IMPLEMENTATION PLAN

The Draft Implementation Plan was issued to TANK members on 12 June 2018. The implementation plan provides tasks, responsibilities, measurement and timeframes for the execution of the following 10 actions resulting from the TANK process.

Table 5 - TANK Implementation Plan Actions

Action	Description
1	Catchment Collectives & Industry Programmes
2	Reduce Sedimentation & Manage Erosion Risk
3	Reduce Nutrient Contamination of Freshwater
4	Riparian Management & Stock Exclusion
5	Improve Wetland & Lake Management
6	Reduce the Impact of Stormwater/Wastewater Discharges
7	Improve Water Allocation/Use Efficiency
8	Increase Ecosystem Health and Biodiversity
9	Ongoing Communication, Commitment & Involvement
10	Investigations and Monitoring



## 5. BACKGROUND TO PLAN CHANGE

### 5.1 HAWKE'S BAY LAND AND WATER MANAGEMENT STRATEGY

The Hawke's Bay Land and Water Management Strategy (LAWMS) provides direction and a common focus for the management of land and water in Hawke's Bay for improved economic and environmental outcomes<sup>30</sup>.

The overall vision of the LAWMS is:

*In Hawke's Bay, land and water are highly valued, used wisely and sustainably managed – by all, for all.*

LAWMS contains a number of policies and current priority actions that are relevant to managing land and freshwater resources on a catchment basis. The priorities outlined in the LAWMS lead to the TANK process and Change 9 with the aim of improving or maintain the overall quality of fresh water in the TANK catchments.

### 5.2 LAND AND WATER RESOURCE OF TANK CATCHMENTS

#### 5.2.1 Surface Water Resources<sup>31</sup> and Land Use Overview

The surface water resources and land use of the TANK catchments is detailed in the 2016 report 'Ngaruroro, Tutaekuri, Karamu River and Ahuriri Estuary Catchments State and Trends of River Water Quality and Ecology', an extract of which is provided below.

##### **Ngaruroro River Catchment**

*The Ngaruroro River catchments covers an area of approximately 2,000 km<sup>2</sup> with the headwaters in the forested hills of the Kaweka Range. The upper catchment is a fast flowing river in a bed of rocks, boulders and coarse gravel, dominated by native vegetation with some pasture down to Whanawhana. Between Whanawhana and Maraekakaho, the river is braided, flowing in a relatively wide and flat channel bordered by steep hill country and high river terraces. The land use in this part of the catchment is predominantly dry stock farming with land use changes occurring in the last 15 years.*

*Downstream of Maraekakaho the river runs through plains and low rolling hill country and land use becomes more varied, including viticulture and cropping. The river channel is wide and flat, with a low gradient and a semi-braided morphology, constrained on each*

<sup>30</sup> Hawke's Bay Regional Council, 2011. Hawke's Bay Land and Water Management Strategy.

<sup>31</sup> Hawke's Bay Regional Council, July 2016. Ngaruroro, Tutaekuri, Karamu River and Ahuriri Estuary Catchments State and Trends of River Water Quality and Ecology.

side by stopbanks. The area is a zone of groundwater recharge, losing approximately 5 m<sup>3</sup>/s, or 20% of its median flow, to groundwater between Ohiti and Fernhill. The aquifer is important to the region, providing water for multiple uses including irrigation, processing and industrial use, as well as an untreated water source for Hastings and Napier. The Ngaruroro River then flows eastwards to an estuary shared with the Tutaekuri River. It flows into the Pacific Ocean at Hawke's Bay, south of Napier.

Significant wetlands within the catchment include lakes Runanga, Oingo, Hurimoana, Kautuku and Potaka, along with Pig Sty Swamp and Waitangi wetland.

The Waitangi Estuary is where the Ngaruroro (along with the Tutaekuri River and Karamu Stream) meet the sea.

#### **Tutaekuri River Catchment**

The Tutaekuri river catchment covers an area of approximately 836 km<sup>2</sup>. The headwaters located in the native vegetation of the Ruahine Range, and the river then flows through commercial pine forest. The river has good quality habitat for most of its length, with regular occurrence of riffles, pools and bends and a predominantly cobble streambed.

Dry stock farming dominates the middle catchment although approximately 7000 ha of dairy farming has been established over the last 10 to 15 years, mostly around Patoka. Downstream of the Mangaone River confluence, the Tutaekuri valley widens and flattens, and the river takes a braided morphology. Land use here is predominantly vineyards and orchards, with dry stock farming in the surrounding hills as well as peri-urban/commercial development.

There are a number of freshwater wetlands in the catchment, the largest being the ecologically significant Lake Te Rotokare.

As noted above the Tutaekuri River meets the sea at the Waitangi Estuary.

#### **Karamu Stream Catchment**

The Karamu catchment is approximately 490 km<sup>2</sup>, extending south from Awatoto to Havelock North and west to the Raukawa Range. The Karamu Stream and its tributaries drain the Poukawa Basin, the Kohinurakau, Kaokaoroa and Raukawa Ranges and a large part of the Heretaunga Plains.

The catchment covers the majority of the Heretaunga Plains which has been developed extensively for agriculture and comprises some of the most productive cropping areas in New Zealand. The Karamu catchment is the predominant region in Hawke's Bay for orcharding, cropping, and viticulture, while the southwestern half of the catchment primarily supports dryland sheep and beef with the exception of the Poukawa Basin, which is a significant cropping area.

Waterways in the Karamu catchment have been extensively modified for flood protection purposes. The current Karamu Stream occupies a former course of the Ngaruroro River. Flooding of the productive, southern area of the Heretaunga Plains has been an issue since the 1850s. In 1969, as part of the Heretaunga Plains Flood Protection scheme, the Ngaruroro River was diverted to the north, leaving the Karamu and Raupare streams to feed the lower Karamu Stream or, as it is also known, the Clive River and Ngaruroro Tawhito (the 'old' Ngaruroro).

There are several freshwater wetlands in the catchment which are ecologically significant, the largest being Lake Poukawa and Pekapeka Swamp.

As noted above the Karamu River meets the sea at the Waitangi Estuary.

#### **Ahuriri Catchment**

The Ahuriri estuary has a catchment of 14,564 hectares. The Ahuriri is Hawke's Bay's most urbanised catchment and includes Napier and surrounding suburbs north to Bay View and south to Awatoto. Wharerangi and Te Maara marae are in the catchment. Therefore, the most significant water management issues are urban-based. The Napier City stormwater network which protects the urban and industrial areas from flooding generally flows into the Ahuriri Estuary. The Ahuriri estuary itself is a shallow microtidal estuary with an area of approximately 270 hectares.

Freshwater inflows into the estuary are minimal compared to other estuaries in the region. Despite extensive modification, reclamation, drainage, and discharges from the stormwater network, the estuary is recognised as a regionally and nationally significant area, with high wildlife and fisheries values. In the Regional Coastal Environment Plan (2012), the Ahuriri Estuary is classified as a Significant Conservation Area, which affords the estuary particular protection mechanisms.

### **5.2.2 Groundwater Resources<sup>32</sup>**

Heretaunga Plains is an alluvial formation, located on the east coast of the North Island of New Zealand, with an area of about 300 km<sup>2</sup>. The Plains have been formed by sediments deposited by the Ngaruroro, Tukituki and Tūtaekuri Rivers (Dravid & Brown, 1997). The Heretaunga Aquifer is a deep sedimentary basin underlying the Heretaunga Plains. The Heretaunga Aquifer System includes the main aquifer and several connected peripheral valley aquifers.

The rivers, streams and drains on the Heretaunga Plains form a complex network that interacts with the underlying Heretaunga Aquifer System. The Ngaruroro River is the

<sup>32</sup> Hawke's Bay Regional Council, August 2018. Heretaunga Aquifer Groundwater Model Scenarios Report.

largest river in the network which provides around two thirds of recharge to the Heretaunga Aquifer System.

### 5.3 VALUES AND USES WITHIN THE TANK CATCHMENTS

The RPS (via Change 5) acknowledges a range of non-site specific values relevant to the TANK water bodies, as well as cultural values and values associated with recreation, birds, stock and domestic water, and native fish.

The TANK Group has identified important freshwater values for the Greater Heretaunga and Ahuriri region, many of which apply throughout the region. The list of values considered important by TANK stakeholders are either properties of freshwater or well-beings supported by the use of fresh water and are detailed in the Figures below.

The Change 9 gives effect to the RPS policies and has further incorporated Māori values for which all waterbodies in the TANK catchment area are to be managed.

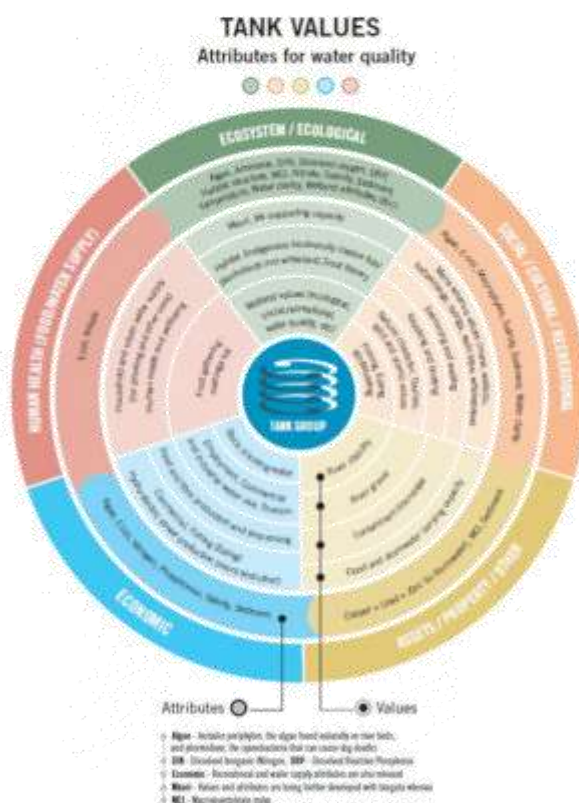


Figure 2 - TANK Values and Attributes

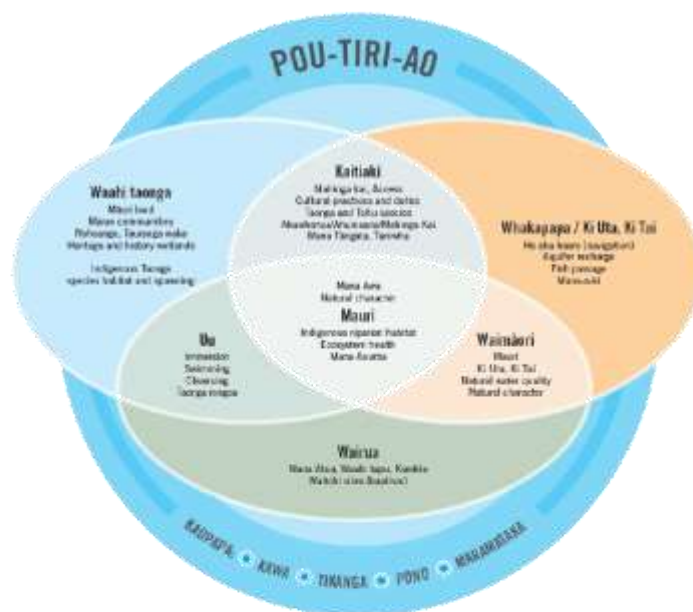


Figure 3 - Wariu (value) groups and aspects for management in the Ngaruroro Catchment



## 6. PLAN CHANGE MATTERS TO BE ADDRESSED

### 6.1 OBJECTIVES OF THE TANK CATCHMENTS

The 16 objectives set out in Change 9 inform the water quality, water quantity and land use policies and rules that follow. The objectives recognise the interconnectedness of the Heretaunga Plains aquifer systems with the surface water catchments and are therefore designed to maintain or enhance the values identified through TANK process for the catchments using targets or limits for water quality and quantity, based on four surface water quality management zones (Table 6) and the groundwater of the Heretaunga Plains aquifer.

Table 6 - TANK surface water quality management zones

Zone	Description	Surface water body
Zone 1	Upper catchments	Ngaruroro River Tutaekuri River
Zone 2	Mid to low main stem	Ngaruroro River mid - low Tutaekuri River mid - low
Zone 3	Hill country tributaries	Ngaruroro River Tutaekuri River
Zone 4	Lowland tributaries	Ngaruroro River Karamu Stream Ahuriri Estuary

### 6.2 WATER QUALITY

#### 6.2.1 Current Approach in RRMP<sup>33</sup>

The policies relating to water quality contained within the operative RRMP are described as environmental guidelines. These guidelines have been given effect to through conditions on permitted activities, decision-making on resource consent applications and when considering un-regulated activities. The operative RRMP contains no water quality limits or standards apart from some conditions on permitted activity rules.

#### 6.2.2 Approach in TANK Plan Change

The NPSFM requires that freshwater objectives are established, and that freshwater quality limits are set for all freshwater management units.

<sup>33</sup> Section 9.1, S32 Evaluation Summary Report (Plan Change 6 - Tukituki Catchment)



Objectives 2 and 3 of Change 9 relate to the maintenance or improvement of water quality and the protection of values within the TANK catchments through the setting of the water quality targets / limits to improve overall freshwater quality by 2040 (Schedule 1).

Add discussion on Objective 4 / Schedule 2 following completion.

Objectives 5 to 12 provides direction for activities within the TANK catchments and the groundwater resource to provide for use the long-term health of the freshwater resource, habitat and users.

### 6.2.3 Schedule 1 – Freshwater Quality Objectives

The attributes in schedule 1 are as follows:

- Water clarity
- Turbidity
- Deposited sediment
- Periphyton
- Cyanobacteria
- Macrophytes
- MCI
- DIN
- DRP
- Nitrate
- Ammonia
- *E. coli*
- Dissolved Oxygen
- Temperature
- matauranga Maori attributes

Add detail from HBRC Water Quality Report to describe how each value is derived.

## 6.3 WATER ALLOCATION

### 6.3.1 Current approach in RRMP<sup>34</sup>

The RRMP contains a number of policies relating to water allocation for surface water resources including the setting of minimum flows and allocable volumes for rivers and streams with the TANK catchments. Allocable volumes were defined as being the difference between the summer 7-day Q95 and the minimum flow.

<sup>34</sup> Section 11.1, S32 Evaluation Summary Report (Plan Change 6 - Tukituki Catchment)

No allocation limits for groundwater resources are currently set in the RRMP. Instead, environmental guidelines indicated that the safe yield identified for an aquifer should not be exceeded and groundwater takes should not cause a reduction in the flow of rivers, levels of springs or lakes or ecologically significant wetlands.

The Ngaruroro catchment is at full allocation and the Karamu catchment is currently considered to be over allocated therefore this is one of the one of the key drivers for the review of the water allocation limits in the plan<sup>35</sup>.

### 6.3.2 Approach in TANK Plan Change

The allocation of water in the TANK catchments is dealt with in Objectives 13 and 14 of Change 9. A number of technical reports have been prepared to consider existing allocation issues and provide guidance for the setting of the minimum and trigger flows and allocation limits (Schedule 6) and high flow allocation limits and triggers limits (Schedule 7). These limits will provide

Together, these limits will determine a modified flow regime that sustains river ecosystems and instream values. Security of supply is a relevant consideration in any water allocation framework, both in terms of setting the resource limit and in terms of how that water is then allocated to individuals through the consent process.

The TANK Group looked at the appropriateness of the existing range of minimum flows and allocation limits that manage the abstraction of water from the Ngaruroro and Tūtaekuri Rivers and impose restrictions on abstraction at times of low flows and recognised a wide range of instream values dependent on the maintenance of flows in the river as well as the significant contribution that abstraction of water makes to the human health, economic, social and cultural well-being of its community.

Their decision making was informed by new information about connectivity between water bodies, especially in relation to the stream depletion effects of groundwater takes in the Heretaunga Plains.

Change 9 sets Minimum Flow Limits, Water Allocation Limits (Interim Allocations), and High Flow Allocation for surface water and groundwater in the TANK catchments.

<sup>35</sup> TANK Group Terms of Reference updated May 2018



## 7. EVALUATION UNDER SECTION 32

### 7.1 IDENTIFICATION OF ISSUES

Plan Change 9 in defining the matters to be resolved identified 8 issues that the plan change seeks to address. The headings of the eight issues are listed below:

- Issue 1: Valuing Water: He Wai he Taonga
- Issue 2: Mauri, Ecosystem Health and Contaminant Discharges
- Issue 3: Mauri, Ecosystem Health and Water flows and levels
- Issue 4: Water Demand and Allocation, Efficient Use of Water
- Issue 5: Water Demand
- Issue 6: Balancing Costs and Timeframes
- Issue 7: Understanding TANK Freshwater Resources
- Issue 8: Accounting for Predicted Climate Change

An explanation to each of the above issues is provided in Change 9. Each of the 16 objectives proposed for Change 9 are set out under section 7.2 of this report below. The Issues that Change 9 seeks to address through each of the objectives are listed under the subheading for each objective below.

### 7.2 APPROPRIATENESS OF THE OBJECTIVES FOR ACHIEVING THE PURPOSE OF THE ACT

The following tables set out each objective of Change 9 and provide an examination of its appropriateness in achieving the purpose of the RMA.

The purpose of the RMA is set out under section 3.1.1 of this report above. It is also relevant that in regard to freshwater management the purpose of the RMA, sustainable management, has been further defined by the NPSFM which sets specific national direction for freshwater management and must be given effect to by Change 9<sup>36</sup>. The purpose of the RMA has also been defined by Change 5 to the RPS<sup>37</sup> specifically in regard to land and freshwater management. The RPS must also be given effect to by Change 9. Although the sustainable management purpose of the RMA is set out in section 5, that purpose is further defined by the principles set out in sections 6, 7 and 8, which are also relevant to consider in this assessment.

<sup>36</sup> RMA section 67(3)(a)

<sup>37</sup> Accepting that there is a small portion of Change 5 relating to wetlands that is the subject of an outstanding Environment Court Appeal, the remainder of the change is now beyond the point of legal challenge.



The following assessment therefore seeks to test that the proposed objectives of Change 9 are appropriate in achieving:

- the purpose of the Act as set out in section 5 and further defined by sections 6, 7 and 8 of the RMA;
- the more specific interpretation of sustainable management for freshwater resources in the NPSFM; and
- sustainable land and freshwater management in Change 5 of the RPS.

The structure of this section of the report is to quote the proposed objective from Change 9 and then set out in a table how that objective is appropriate in achieving sustainable management in terms of the three statutory instruments referred to above.

In terms of considering different options to the final objectives chosen, there are currently no specific objectives in the RRMP applying to the TANK catchments. Retaining the status quo of having no such objectives is not an option if the NPSFM and the RPS are to be given effect. Clearly there would be many alternative options to the wording details of the 16 objectives proposed by Change 9, however the proposed wording has resulted from the TANK Stakeholder Group collaborative process and in this way the objectives are considered the most appropriate option for achieving the purpose of the RMA.

### 7.2.1 Objective 1

Objective 1 seeks to address Issues 1, 2, 3 and 7 and is as follows:

*When setting objectives, limits and targets;*

- a) Te Mana o te Wai<sup>38</sup> 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 waterbody values listed in Table 1 (RPS) are provided for.*

<sup>38</sup> From Objective AA and Policy AA in NPSFM



Table 7 – Evaluation of Objective 1

RMA Instrument	Objective 1 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 1 seeks to promote the sustainable management of the freshwater resources of the TANK catchments in a manner that enables the values identified by the community to be met in providing for their social, economic, and cultural well-being and for their health and safety.</p> <p>Specifically, the cultural wellbeing of iwi / hapū is enabled by clauses a), b) and c) of Objective 1.</p> <p>Objective 1 clauses a), b), d) and e) will help achieve: section 5(a) in sustaining the potential of the TANK freshwater resources in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the TANK freshwater and associated soil and ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>RMA section 6(e) and the relationship of Māori with water is recognised and provided for by objective 1 in general and clauses a, b) and c) in particular. Similarly, the same can also be said of RMA section 7(a) kaitiakitanga and 8 the Principles of Te Tiriti o Waitangi.</p>
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Objective 1 a), b) and c) of Change 9.</p> <p>Objectives A2 &amp; A3 (improving freshwater quality) of the NPSFM are given effect to by the continuous improvement approach in Objective 1b) of Change 9.</p> <p>Objectives A1, A4 &amp; B5 of the NPSFM are given effect to by Objective 1d) of Change 9 in enabling sustainable use of freshwater resources.</p> <p>Objectives A1 &amp; B4 (protecting significant values of wetlands and outstanding freshwater bodies) of the NPSFM are given effect to by Objective 1 e) of Change 9.</p>
RPS including Change 5	<p>Objective LW1 'Integrated management of freshwater and land use development', has 15 sub clauses relating to different aspects of integrated management. Objective 1 of Change 9 helps achieve (and give effect to) a number of these, namely Objective 1a) helps achieve LW1 as a whole as well as specific subclause LW1 – 3 (aquifer recharge and coastal); Objective 1 b) specifically helps achieve LW1 – 2 (improvement of water quality); Objective 1 d) helps achieve LW1 – 5 (regional value for human and animal drinking water), LW1 – 6 (freshwater for production and processing of beverages, food and fibre) and LW1 – 9 (efficient allocation and use); and Objective 1 e)</p>



RMA Instrument	Objective 1 Examination against the Purpose of the Act
	<p>helps achieve LW1 – 1 (outstanding freshwater bodies), LW1 – 1A (wetland values), LW1 – 4 (indigenous species and ecosystems), LW1 – 6 (freshwater values for production and processing of beverages, food and fibre), and 13 (recreational and conservation values).</p> <p>Objective LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 1 e) of Change 9.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 1 a), c) and e).</p>

## 7.2.2 Objective 2

Objective 2 seeks to address Issues 2, 3, 4, 6 and 7 and is as follows:

*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 waterbody 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<sup>39</sup>.*

Table 8 - Evaluation of Objective 2

RMA Instrument	Objective 2 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	Objective 2 seeks to promote the sustainable management of the freshwater resources of the TANK catchments so that water use can enable the community to provide for their social, economic, and cultural well-being and for their health and safety provided that water quality is maintained or improved. The timeframe provided for in Objective 2 to improve degraded waterbodies by 2040, acknowledges the need to continue to enable the economic and social wellbeing of resource users and wider community to be provided for while changes in land use practices and advancements in technology allow the higher state water quality attributes to be achieved.

<sup>39</sup> 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);



RMA Instrument	Objective 2 Examination against the Purpose of the Act
	<p>Objective 2 will achieve: RMA section 5(a) in sustaining the potential of the TANK freshwater resources to be of current or improved quality in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the TANK freshwater resources by maintaining and where required improving, water quality; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>It is noted that the need to maintain or improve water quality in Objective 2 is also a requirement of RMA section 69(3) 'Rules relating to water quality' which states: "... a regional council shall not set standards in a plan which result, or may result, in a reduction of the quality of the water in any waters...".</p> <p>Improvements in the water quality attributes within the TANK catchments sought by Objective 2 will also help to recognise and provide for the matters of national importance in RMA sections 6(a) 'preservation of the natural character of...wetlands, and lakes and rivers...'; 6(c) 'the protection of ...significant habitats of indigenous fauna'; and 6(e) 'the relationship of Māori with ...water'.</p> <p>Objective 2 also helps achieve the matters requiring particular regard in section 7 of the RMA: 7(b) 'the efficient use and development of natural and physical resources' insofar as use of water resources is still enabled and a timeframe is set within which to improve water quality attributes by. This will enable resource users to maintain their efficiency while undertaking changes in land use practices and adopting the use of new technology over time to allow the higher state water quality attributes to be achieved. Improvements in water quality over time will help achieve RMA 7(c) the maintenance and enhancement of amenity values; 7(d) intrinsic values of ecosystems; 7(f) maintenance and enhancement of the quality of the environment; and 7(h) the protection of the habitat of trout and salmon.</p>
NPSFM	<p>Objectives A2 &amp; A3 of the NPSFM are given effect to by the continuous improvement approach in Objective 2 for degraded waterbodies. Objective A4 is also given effect to by Objective 2 setting a time limit within which improvements are required to be achieved by which <i>"enables communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quality, within limits."</i></p>
RPS including Change 5	<p>Objective 2 gives effect to RPS Objective LW1 'Integrated management of freshwater and land use development', and in particular to sub clauses LW1 – 2 (maintenance of the overall quality of freshwater and the improvement of water quality in waterbodies that have been degraded); LW – 2B (avoiding any further over-allocation of freshwater and phasing out existing</p>



RMA Instrument	Objective 2 Examination against the Purpose of the Act
	<p>over allocation); LW1 – 4 (safeguarding the life supporting capacity and ecosystem processes of freshwater) in regard to maintaining and improving the quality of TANK freshwater bodies. LW1 – 6 (recognising the significant regional and national value of freshwater for production and processing of beverages, food and fibre) is given effect to by providing sufficient time for the improvement in water quality attributes to be met so that production and processing water users are able to continue their operations while contributing to improved water quality in the medium term.</p> <p>RPS Objective LW2 states that where there is conflict between competing values or uses "...regional plans provide clear priorities for the protection and use of those freshwater resources." Objective 2 of Change 9 provides clear direction that water quality is to be maintained where objectives are being met or improved in degraded waterbodies so that they meet water quality attribute states in Schedule 1 by 2040. Although the required improvements in water quality may conflict with some of the 'water use' focused values set out in Table 1 of the RPS Change 5 for the TANK catchments, there is clear direction that the stated water quality attributes must be achieved over time by 2040.</p>

### 7.2.3 Objective 3

Objective 3 seeks to address Issues 1, 2 and 3 as follows:

*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.*

Table 9 - Evaluation of Objective 3

RMA Instrument	Objective 3 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 3 will promote sustainable management of the freshwater resources of the TANK catchments by enabling the community, including in particular the Māori community with mana whenua of the TANK catchments, to provide for their social and cultural well-being in protecting mauri and ecosystem health for those values set out in Schedule 1.</p> <p>Objective 3 will achieve: RMA section 5(a) by sustaining the potential of the TANK freshwater resources in meeting the needs of future generations; 5(b) by safeguarding the life supporting capacity of the TANK freshwater resources by maintaining mauri and ecosystem health; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p>



RMA Instrument	Objective 3 Examination against the Purpose of the Act
	<p>Objective 3 also helps to achieve the purpose of the RMA as expressed through sections 6(e) 'the relationship of Māori with ... water', 7(a) 'kaitiakitanga' and 8 'Te Tiriti o Waitangi'.</p> <p>Objective 3 will also help achieve RMA section 6(a) 'the preservation of the natural character of ...wetlands, and lakes and rivers...'; and 6(c) 'the protection of ...significant habitats of indigenous fauna'; by protecting mauri and ecosystem health of the waterbodies within the TANK catchments. The same can also be said of RMA section 7(d) 'intrinsic values of ecosystems', 7(f) 'maintenance and enhancement of the quality of the environment', and (h) 'the protection of the habitat of trout and salmon'.</p>
NPSFM	<p>Objective 3 specifically achieves Objective AA1 and Policy AA1 relating to Te Mana o te Wai, of the NPSFM.</p> <p>Objective 3 in association with Schedule 1 also achieves Objective CA1 and Policy CA2 of the NPSFM by providing an approach that establishes freshwater objectives through discussions with the community including tangata whenua, in formulating numeric attribute states for national values and other values consistent with the attribute states in Appendix2 (Attribute Tables) of the NPSFM.</p>
RPS including Change 5	<p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 3 in requiring the achievement of Te Mana o te Wai, kaitiakitanga and mauri in the freshwater management of the TANK catchments.</p>

#### 7.2.4 Objective 4

Objective 4 seeks to address Issues 1, 6 and 7 and is as follows:

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

Table 10 – Evaluation of Objective 4

RMA Instrument	Objective 4 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	Cannot assess until Schedule 2 is available – without this how Objective 4 achieves the purpose of the RMA is unclear.

RMA Instrument	Objective 4 Examination against the Purpose of the Act
NPSFM	
RPS including Change 5	

### 7.2.5 Objective 5

Objective 5 seeks to address Issues 1, 2, 3 and 4 and is as follows:

*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;*

*e) primary production water for community social and economic well-being;*

*and*

*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.*

Table 11 - Evaluation of Objective 5

RMA Instrument	Objective 5 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 5 seeks to promote the sustainable management of the freshwater resources of the Ahuriri catchments in a manner that enables resource use so that people and communities can provided for their social, economic, and cultural well-being and for their health and safety, provided the resource is maintained and enhanced. Objective 5 specifically seeks to enable the use of the Ahuriri catchments freshwater resource for domestic needs (5d), primary production (5e), recreational activities and the collection of mahinga kai in the estuary (5f).</p> <p>Specifically, the cultural well-being of iwi / hapū is enabled by Objective 5 seeking to maintain and enhance the mauri of the Ahuriri catchments and by</p>

RMA Instrument	Objective 5 Examination against the Purpose of the Act
	<p>the protection clauses a), b) and c) of Objective 5 and reference to cultural activities in clause f).</p> <p>The direction of Objective 5 to meet the water quality states in Schedule 1; to maintain and enhance mauri, quality and quantity of the Ahuriri Freshwater catchments; and to address the environmental issues in clauses a), b), c) and f) will help achieve: RMA section 5(a) in sustaining the potential of the Ahuriri catchments freshwater resources in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the Ahuriri catchments freshwater and associated soil and ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>RMA section 6(e) and the relationship of Māori with water is recognised and provided for by objective 5 in general (noting the reference to the mauri of the Ahuriri catchments) and clause 5f) in particular. The same can also be said of RMA section 7(a) kaitiakitanga and 8 the Principles of Te Tiriti o Waitangi.</p> <p>In regard to other RMA section 6 and 7 matters, the specific references in Objective 5b) to healthy ecosystems and 5c) to healthy indigenous aquatic populations, will help to achieve section 6(c) (protection of indigenous habitats), 7(d) (intrinsic values of ecosystems) and 7(h) (the protection of the habitat of trout and salmon). The references in objective 5d) to meeting domestic water needs and 5e) to primary production water, will help achieve RMA section 7(b) (efficient use and development of natural and physical resources).</p>
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Objective 5 through the use of a Te Mana o te Wai approach in the identification of values and the setting of freshwater limits and objectives applicable to the Ahuriri freshwater catchments specified in Schedule 1.</p> <p>Objectives A1 and B1 (safeguarding life-supporting capacity, ecosystem processes and indigenous species and the health of people and communities) is given effect to for the Ahuriri catchments by Change 9 Objective 5 clauses a), b), c), and f).</p> <p>Objectives A2 &amp; A3 (protecting significant values and improving freshwater quality) of the NPSFM are given effect to by Change 9 Objective 5 referencing Schedule 1 and requiring the maintenance and enhancement of the mauri, water quality and water quantity of the Ahuriri catchment.</p> <p>Objectives A4 &amp; B5 and Policy A7 (enabling economic well-being) of the NPSFM are given effect to by Objective 5d) &amp; e) of Change 9 in enabling</p>

RMA Instrument	Objective 5 Examination against the Purpose of the Act
	<p>sustainable use of freshwater resources for domestic needs and primary production.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) of the NPSFM is given effect to by Change 9 Objective 5a) (to enable Ahuriri estuary sediments to be healthy).</p> <p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 5 in general (noting the reference to the mauri of the Ahuriri catchments) and clause f) (enabling cultural activities and the collection of mahinga kai in the Ahuriri estuary) in particular.</p>
RPS including Change 5	<p>Objective LW1 'Integrated management of freshwater and land use development', has 15 sub clauses relating to different aspects of integrated management. Objective 5 of Change 9 helps achieve (and give effect to) a number of these, namely Objective 5 helps achieve LW1 as a whole in seeking to achieve the integrated and sustainable management of the Ahuriri freshwater catchments; and LW1 – 2 in the maintenance and enhancement of the overall water quality in the catchment. Objective 5 f) specifically helps achieve LW1 – 3 (recognising impacts on the coastal environment) &amp; LW1 – 14 (preserving the natural character of the coastal environment); Objective 5 b) &amp; c) helps achieve LW1 – 4 (safeguarding life supporting capacity, ecosystem processes and indigenous species) &amp; LW1 – 13 (recreational and conservation values); Objective 5 d) &amp; e) help achieve LW1 – 5 (water for human and animal drinking purposes) &amp; LW1 – 6 (freshwater for production and processing of beverages, food and fibre).</p> <p>Objective LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 5 of Change 9 generally in terms of the matters listed in Objective 5 a) – f) and by clearly prioritising that the water quality states specified in schedule 1 are to be met.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 5 generally in seeking that the mauri of the Ahuriri freshwater catchments is maintained and enhanced; and specifically in regard to 5c) in enabling healthy populations of indigenous flora and fauna (LW3d)) and 5f) in enabling the healthy functioning of the Ahuriri estuary ecosystem including provision for the collection of mahinga kai (LW3a) – d)).</p> <p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following values being enabled by Objective 5:</p>



RMA Instrument	Objective 5 Examination against the Purpose of the Act
	<ul style="list-style-type: none"> <li>➤ Regionally significant native water bird populations and habitats (5c))</li> <li>➤ Cultural values and uses (5f))</li> <li>➤ Individual domestic needs and stock drinking needs (5d) &amp; e))</li> <li>➤ Freshwater use for land-based primary production (5e))</li> <li>➤ Amenity for contact recreation including swimming in Ahuriri Estuary (5f))</li> <li>➤ Native fish habitat (5c)).</li> </ul> <p>Objectives 25 and 27 of the RPS<sup>40</sup> (Surface water quantity and quality is suitable for sustaining or improving aquatic ecosystems) are achieved by Objective 5 of Change 9 referencing Schedule 1 and requiring the maintenance and enhancement of the mauri, water quality and water quantity of the Ahuriri catchment.</p>

### 7.2.6 Objective 6

Objective 6 seeks to address Issues 1, 2, 3 and 4 and is as follows:

*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**, and its tributaries so that the mauri, water quality and water quantity are maintained in the mainstem above the Whanawhana 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-boating in the braided reaches of the Ngaruroro;*

*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;*

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

*and*

<sup>40</sup> As amended by Change 5



*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.*

**Table 12 - Evaluation of Objective 6**

RMA Instrument	Objective 6 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 6 seeks to promote the sustainable management of the freshwater resources of the Ngaruroro River and its tributaries in a manner that enables resource use so that people and communities can provide for their social, economic, and cultural well-being and for their health and safety, provided the resource is maintained where water quality values are currently high and improved over the remainder of the catchment.</p> <p>Objective 6 specifically seeks to enable the use of the Ngaruroro catchment freshwater resource for social and cultural well-being: recreational activities including swimming and boating (6c); collection of mahinga kai (6d); domestic water needs (6e); and recreation activities and the collection of mahinga kai in the Waitangi Estuary (6h). The objective also specifically seeks to enable the use of the Ngaruroro catchment freshwater resource for economic well-being: primary production and associated processing and other urban activities (6f); and contribution to water flows and water quality in the connected Heretaunga Plains Aquifers (given the many water takes in these aquifers) (6g).</p> <p>Specifically, the cultural wellbeing of iwi / hapū is enabled by Objective 6 seeking to maintain the mauri of the Ngaruroro River and its tributaries where water quality is already high and to improve mauri in the tributaries and lower reaches where water quality is currently compromised. The cultural wellbeing of iwi / hapū is also enabled by the protection clauses a), and b) of Objective 6 and reference to cultural activities in clauses c), d) and h).</p> <p>The direction in Objective 6 to: meet the water quality states in Schedule 1; to maintain and where necessary improve the mauri, quality and quantity of the Ngaruroro River and its tributaries; and to address the environmental issues in Objective 6 clauses a), b), c) and h) will help achieve: RMA section 5(a) in sustaining the potential of the Ngaruroro catchment freshwater resources in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the Ngaruroro catchment freshwater and associated ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>RMA section 6(e) and the relationship of Māori with water is recognised and provided for by Objective 6 in general (noting the reference to the mauri of the Ngaruroro catchment) and clauses c), d) and h) in particular. The same</p>



RMA Instrument	Objective 6 Examination against the Purpose of the Act
	<p>can also be said of RMA section 7(a) kaitiakitanga and 8 the Principles of Te Tiriti o Waitangi.</p> <p>In regard to other RMA section 6 and 7 matters, the specific references in Objective 6a) to healthy ecosystems and 6b) to healthy indigenous aquatic and avian fauna populations, will help to achieve section RMA section 6(c) (protection of indigenous habitats), 7(d) (intrinsic values of ecosystems) and 7(h) (the protection of the habitat of trout and salmon). The references in Objective 6e) to meeting domestic water needs and 6f) to primary production water, will help achieve RMA section 7(b) (efficient use and development of natural and physical resources).</p>
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 6 through the use of a Te Mana o te Wai approach in the identification of values and the setting of freshwater limits and objectives applicable to the Ngaruroro River and its tributaries specified in Schedule 1 and the matters sought to be enabled in Objective 6a) – h).</p> <p>Objectives A1 and B1 (safeguarding life-supporting capacity, ecosystem processes and indigenous species and the health of people and communities) is given effect to for the Ngaruroro River and its tributaries by Change 9 Objective 6 clauses a), b), c) and h).</p> <p>Objectives A2 &amp; A3 (protecting significant values and improving freshwater quality unless regional targets are already achieved) of the NPSFM are given effect to by Change 9 Objective 6 referencing Schedule 1 and requiring the maintenance of the mauri, water quality and water quantity of the Ngaruroro River in the main stream above the Whanawhana Cableway and in the Taruarau River and improved in the lower reaches of the Ngaruroro River and its tributaries (which also gives effect to Policy A6 of the NPSFM).</p> <p>Objectives A4 &amp; B5 and Policy A7 (enabling economic well-being) of the NPSFM are given effect to by Objective 6e) &amp; f) of Change 9 in enabling sustainable use of freshwater resources for domestic needs and primary production.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) of the NPSFM is given effect to by Change 9 Objective 6 generally in providing for the use and development of land and discharge of contaminants and nutrients in the Ngaruroro catchment subject to maintaining or improving the mauri, quality and quantity of water in the catchment.</p>



RMA Instrument	Objective 6 Examination against the Purpose of the Act
	<p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 6 in general (noting the reference to the mauri of the Ngaruroro River and its tributaries) and 6c) (cultural activities), 6d) (collection of mahinga Kai) and 6h) (enabling cultural activities and the collection of mahinga kai in the Waitangi estuary) in particular.</p>
<p>RPS including Change 5</p>	<p>RPS Objective LW1 'Integrated management of freshwater and land use development', has 15 sub clauses relating to different aspects of integrated management. Objective 6 of Change 9 helps achieve (and give effect to) a number of these, namely Objective 6 helps achieve LW1 as a whole in seeking to achieve the integrated and sustainable management of the Ngaruroro River and its tributaries; and LW1 – 2 in the mauri and water quality of the main stream above the Whanawhana cableway and in the Tararua River being maintained and improved in the tributaries and lower reaches.</p> <p>Objective 6g) &amp; h) specifically helps achieve LW1 – 3 (recognising land use and surface water flows can impact on aquifer recharge and the coastal environment) &amp; LW1 – 14 (preserving the natural character of the coastal environment); Objective 6a) b) &amp; c) helps achieve LW1 – 4 (safeguarding life supporting capacity, ecosystem processes and indigenous species) &amp; LW1 – 13 (recreational and conservation values); Objective 6e) &amp; f) help achieve LW1 – 5 (water for human and animal drinking purposes &amp; municipal supply) &amp; LW1 – 6 (freshwater for production and processing of beverages, food and fibre).</p> <p>Objective LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 6 of Change 9 generally in terms of the matters listed in Objective 6a) – h) and by clearly prioritising that the water quality states specified in schedule 1 are to be met for the Ngaruroro River and its tributaries.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 6 generally in seeking that the mauri of the Ngaruroro River and its tributaries is maintained and enhanced; and specifically in regard to 6b) in enabling healthy populations of indigenous flora and fauna (LW3d)) and 6c), d) and h) in enabling cultural activities, collection of mahinga kai and the healthy functioning of the Waitangi estuary ecosystem including provision for the collection of mahinga kai (LW3a) – d)).</p> <p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following values being enabled by Objective 6:</p>



RMA Instrument	Objective 6 Examination against the Purpose of the Act
	<ul style="list-style-type: none"> <li>➤ Regionally significant native water bird populations and habitats (6b))</li> <li>➤ Cultural values and uses (6c), d) &amp; h))</li> <li>➤ Individual domestic needs and stock drinking needs (6e) &amp; f))</li> <li>➤ Industrial and commercial water supply (6f))</li> <li>➤ Native fish habitat in the Ngaruroro River catchment (6b))</li> <li>➤ Recreational trout angling and trout habitat in the Ngaruroro River upstream of the Whanawhana Cableway and between the Whanawhana Cableway and the confluence with the Maraekakaho River (6b) &amp; c))</li> <li>➤ Trout spawning habitat (6b)</li> <li>➤ Urban and social infrastructure facilities water supply (6f))</li> <li>➤ Freshwater use for land-based primary production (6f))</li> <li>➤ Amenity for contact recreation including swimming in the lower Ngaruroro River (6c))</li> <li>➤ Recreational trout angling where not identified as a primary value (6c))</li> <li>➤ Trout habitat where not identified as a primary value (6b)).</li> </ul> <p>Objectives 25 and 27 of the RPS<sup>41</sup> (Surface water quantity and quality is suitable for sustaining or improving aquatic ecosystems) are achieved by Objective 6 of Change 9 referencing Schedule 1 and requiring the maintenance and improvement of the mauri, water quality and water quantity of the Ngaruroro River and its tributaries.</p>

### 7.2.7 Objective 7

Objective 7 seeks to address Issues 1, 2, 3 and 4 and is as follows:

*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 **Tutaekuri River** and its tributaries 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;*

<sup>41</sup> As amended by Change 5



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

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;

and

g) 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.

Table 13 - Evaluation of Objective 7

RMA Instrument	Objective 7 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 7 seeks to promote the sustainable management of the freshwater resources of the Tutaekuri River and its tributaries in a manner that enables resource use so that people and communities can provide for their social, economic, and cultural well-being and for their health and safety, provided the resource is maintained where water quality values are currently high in the upper reaches and improved over the remainder of the catchment. The objective specifically seeks to enable the use of the Tutaekuri catchment freshwater resource for social and cultural well-being: recreational activities including swimming and boating (7c); collection of mahinga kai (clause d); domestic water needs (7e); and recreation activities and the collection of mahinga kai in the Waitangi Estuary (7g). The objective also specifically seeks to enable the use of the Tutaekuri catchment freshwater resource for economic well-being: primary production and associated processing and other urban activities (7f).</p> <p>Specifically, the cultural wellbeing of iwi / hapū is enabled by Objective 7 seeking to maintain the mauri of the Tutaekuri River and its tributaries where water quality is already high and to improve mauri in the tributaries and lower reaches where water quality is currently compromised. The cultural wellbeing of iwi / hapū is also enabled by the protection clauses a), and b) of Objective 7 and reference to cultural activities in clauses c), d) and g).</p> <p>The direction to: meet the water quality states in Schedule 1; to maintain and where necessary improve the mauri, quality and quantity of the Tutaekuri River and its tributaries; and to address the environmental issues in Objective 7 clauses a), b), c) and g) will help achieve: RMA section 5(a) in sustaining the potential of the Tutaekuri catchment freshwater resources in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the Tutaekuri catchment freshwater and associated</p>



RMA Instrument	Objective 7 Examination against the Purpose of the Act
	<p>ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>RMA section 6(e) and the relationship of Māori with water is recognised and provided for by Objective 7 in general (noting the reference to the mauri of the Tutaekuri catchment) and Objective 7 clauses c), d) and g) in particular. The same can also be said of RMA section 7(a) kaitiakitanga and 8 the Principles of Te Tiriti o Waitangi.</p> <p>In regard to other RMA section 6 and 7 matters, the specific references in Objective 7a) to healthy ecosystems and 7b) to healthy indigenous aquatic and avian fauna populations, will help to achieve section RMA 6(c) (protection of indigenous habitats), 7(d) (intrinsic values of ecosystems) and 7(h) (the protection of the habitat of trout and salmon). The references in objective 7e) to meeting domestic water needs and 7f) to primary production water, will help achieve RMA section 7(b) (efficient use and development of natural and physical resources).</p>
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 7 through the use of a Te Mana o te Wai approach in the identification of values and the setting of freshwater limits and objectives applicable to the Tutaekuri River and its tributaries specified in Schedule 1 and the matters sought to be enabled in Objective 7a) – g).</p> <p>Objectives A1 and B1 (safeguarding life-supporting capacity, ecosystem processes and indigenous species and the health of people and communities) is given effect to for the Tutaekuri River and its tributaries by Change 9 Objective 7 clauses a), b), c) and g).</p> <p>Objectives A2 &amp; A3 (protecting significant values and improving freshwater quality unless regional targets are already achieved) of the NPSFM are given effect to by Change 9 Objective 7 referencing Schedule 1 and requiring the maintenance of the mauri, water quality and water quantity in the upper reaches of the Tutaekuri River and improved in the lower reaches of the Tutaekuri River and its tributaries (which also gives effect to Policy A6 of the NPSFM).</p> <p>Objectives A4 &amp; B5 and Policy A7 (enabling economic well-being) of the NPSFM are given effect to by Objective 7e) &amp; f) of Change 9 in enabling sustainable use of freshwater resources for domestic needs and primary production.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) of the NPSFM is given effect to by Change 9 Objective 7 generally in providing for the use and development of land and discharge of</p>



RMA Instrument	Objective 7 Examination against the Purpose of the Act
	<p>contaminants and nutrients in the Tutaekuri catchment subject to maintaining or improving the mauri, quality and quantity of water in the catchment.</p> <p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 7 in general (noting the reference to the mauri of the Tutaekuri River and its tributaries) and Objective 7 clauses c) (cultural activities), d) (collection of mahinga Kai) and g) (enabling cultural activities and the collection of mahinga kai in the Waitangi estuary) in particular.</p>
RPS including Change 5	<p>RPS Objective LW1 'Integrated management of freshwater and land use development', has 15 sub clauses relating to different aspects of integrated management. Objective 7 of Change 9 helps achieve (and give effect to) a number of these, namely Objective 7 helps achieve LW1 as a whole in seeking to achieve the integrated and sustainable management of the Tutaekuri River and its tributaries; and LW1 – 2 in the mauri and water quality being maintained in the upper reaches of the mainstem and improved in the tributaries and lower reaches.</p> <p>Objective 7g) specifically helps achieve LW1 – 3 (recognising land use and surface water flows can impact on the coastal environment) &amp; LW1 – 14 (preserving the natural character of the coastal environment); Objective 7a) b) &amp; c) helps achieve LW1 – 4 (safeguarding life supporting capacity, ecosystem processes and indigenous species) &amp; LW1 – 13 (recreational and conservation values); Objective 7e) &amp; f) help achieve LW1 – 5 (water for human and animal drinking purposes &amp; municipal supply) &amp; LW1 – 6 (freshwater for production and processing of beverages, food and fibre).</p> <p>Objective LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 7 of Change 9 generally in terms of the matters listed in Objective 7a) – g) and by clearly prioritising that the water quality states specified in schedule 1 are to be met for the Tutaekuri River and its tributaries.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 7 generally in seeking that the mauri of the Tutaekuri River and its tributaries is maintained and enhanced; and specifically in regard to 7b) in enabling healthy populations of indigenous flora and fauna (LW3d)) and 7c), d) and g) in enabling cultural activities, collection of mahinga kai and the healthy functioning of the Waitangi estuary ecosystem including provision for the collection of mahinga kai (LW3a) – d)).</p>



RMA Instrument	Objective 7 Examination against the Purpose of the Act
	<p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following values being enabled by Objective 7:</p> <ul style="list-style-type: none"> <li>➤ Cultural values and uses (7c), d) &amp; g))</li> <li>➤ Individual domestic needs and stock drinking needs (7e) &amp; f))</li> <li>➤ Industrial and commercial water supply (7f))</li> <li>➤ Native fish habitat in the Tutaekuri River catchment (7b))</li> <li>➤ Recreational trout angling and trout habitat in the Tutaekuri River mainstream above the confluence with the Mangaone River (7b) &amp; c))</li> <li>➤ Trout spawning habitat (7b)</li> <li>➤ Urban and social infrastructure facilities water supply (7f))</li> <li>➤ Freshwater use for land-based primary production (7f))</li> <li>➤ Amenity for contact recreation including swimming in the Tutaekuri River (7c))</li> <li>➤ Locally significant native water bird populations and their habitats (7b))</li> <li>➤ Recreational trout angling where not identified as a primary value (7c))</li> <li>➤ Trout habitat where not identified as a primary value (7b)).</li> </ul> <p>Objectives 25 and 27 of the RPS<sup>42</sup> (Surface water quantity and quality is suitable for sustaining or improving aquatic ecosystems) are achieved by Objective 7 of Change 9 referencing Schedule 1 and requiring the maintenance and improvement of the mauri, water quality and water quantity of the Tutaekuri River and its tributaries.</p>

### 7.2.8 Objective 8

Objective 8 seeks to address Issues 1, 2, 3 and 4 and is as follows:

*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** and their tributaries 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;*

<sup>42</sup> As amended by Change 5



- 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;
- and
- 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.

Table 14 - Evaluation of Objective 8

RMA Instrument	Objective 8 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 8 seeks to promote the sustainable management of the freshwater resources of the Karamu and Clive Rivers in a manner that enables resource use so that people and communities can provide for their social, economic, and cultural well-being and for their health and safety, provided the mauri, water quality and water quantity of the resource is improved. The objective specifically seeks to enable the use of the Karamu and Clive Rivers and their tributaries for social and cultural well-being: recreational activities including rowing and waka ama (8c); collection of mahinga kai (8d); domestic water needs (8e); and recreation activities and the collection of mahinga kai in the Waitangi Estuary (8g). The objective also specifically seeks to enable the use of the Karamu and Clive Rivers and their tributaries for economic well-being: primary production and associated processing and other urban activities (8f).</p> <p>Specifically, the cultural wellbeing of iwi / hapū is enabled by Objective 8 seeking to improve the mauri of the Karamu and Clive Rivers and their tributaries. The cultural wellbeing of iwi / hapū is also enabled by the protection clauses a), and b) of the objective and reference to cultural activities in clauses c), d) and g).</p> <p>The direction in Objective 8 to: meet the water quality states in Schedule 1; to improve the mauri, quality and quantity of the Karamu and Clive Rivers and their tributaries; and to address the environmental issues in Objective 8 clauses a), b), c) and g) will help achieve: RMA section 5(a) in sustaining the potential of the natural resources of the Karamu and Clive Rivers and their tributaries in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the Karamu and Clive Rivers and their tributaries freshwater and associated ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p>



RMA Instrument	Objective 8 Examination against the Purpose of the Act
	<p>RMA section 6(e) and the relationship of Māori with water is recognised and provided for by Objective 8 in general (noting the reference to the mauri of the Karamu and Clive Rivers and their tributaries) and clauses c), d) and g) in particular. The same can also be said of RMA section 7(a) kaitiakitanga and 8 the Principles of Te Tiriti o Waitangi.</p> <p>In regard to other RMA section 6 and 7 matters, the specific references in Objective 8a) to healthy ecosystems and 8b) to healthy indigenous aquatic and avian fauna populations, will help to achieve RMA section 6(c) (protection of indigenous habitats), 7(d) (intrinsic values of ecosystems) and 7(h) (the protection of the habitat of trout and salmon). The references in objective 7e) to meeting domestic water needs and 7f) to primary production water, will help achieve RMA section 7(b) (efficient use and development of natural and physical resources).</p>
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 8 through the use of a Te Mana o te Wai approach in the identification of values and the setting of freshwater limits and objectives applicable to the Karamu and Clive Rivers and their tributaries specified in Schedule 1 and the matters sought to be enabled in Objective 8a) – g).</p> <p>Objectives A1 and B1 (safeguarding life-supporting capacity, ecosystem processes and indigenous species and the health of people and communities) is given effect to for the Karamu and Clive Rivers and their tributaries by Change 9 Objective 8 clauses a), b), c) and g).</p> <p>Objectives A2 &amp; A3 (protecting significant values and improving freshwater quality unless regional targets are already achieved) of the NPSFM are given effect to by Change 9 Objective 8 referencing Schedule 1 and requiring the mauri, water quality and water quantity in the Karamu and Clive Rivers and their tributaries to be improved (which also gives effect to Policy A6 of the NPSFM).</p> <p>Objectives A4 &amp; B5 and Policy A7 (enabling economic well-being) of the NPSFM are given effect to by Objective 8e) &amp; f) of Change 9 in enabling sustainable use of freshwater resources for domestic needs and primary production.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) of the NPSFM is given effect to by Change 9 Objective 8 generally in providing for the use and development of land and discharge of contaminants and nutrients in the Karamu and Clive Rivers and their tributaries subject to maintaining or improving the mauri, quality and quantity of water in the catchment.</p>



RMA Instrument	Objective 8 Examination against the Purpose of the Act
	<p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 8 in general (noting the reference to the mauri of the Karamu and Clive Rivers and their tributaries) and clauses c) (cultural activities), d) (collection of mahinga Kai) and g) (enabling cultural activities and the collection of mahinga kai in the Waitangi estuary) in particular.</p>
RPS including Change 5	<p>RPS Objective LW1 'Integrated management of freshwater and land use development', has 15 sub clauses relating to different aspects of integrated management. Objective 8 of Change 9 helps achieve (and give effect to) a number of these, namely Objective 8 helps achieve LW1 as a whole in seeking to achieve the integrated and sustainable management of the Karamu and Clive Rivers and their tributaries; and LW1 – 2 in the mauri and water quality being improved.</p> <p>Objective 8g) specifically helps achieve LW1 – 3 (recognising land use and surface water flows can impact on the coastal environment) &amp; LW1 – 14 (preserving the natural character of the coastal environment); Objective 8a), b) &amp; c) helps achieve LW1 – 4 (safeguarding life supporting capacity, ecosystem processes and indigenous species) &amp; LW1 – 13 (recreational and conservation values); Objective 8e) &amp; f) help achieve LW1 – 5 (water for human and animal drinking purposes) &amp; LW1 – 6 (freshwater for production and processing of beverages, food and fibre).</p> <p>Objective LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 8 of Change 9 generally in terms of the matters listed in Objective 8a) – g) and by clearly prioritising that the water quality states specified in schedule 1 are to be met for the Karamu and Clive Rivers and their tributaries.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 8 generally in seeking that the mauri of the Karamu and Clive Rivers and their tributaries is improved; and specifically in regard to 8b) in enabling healthy populations of indigenous flora and fauna (LW3d)) and 8c), d) and g) in enabling cultural activities, collection of mahinga kai and the healthy functioning of the Waitangi estuary ecosystem including provision for the collection of mahinga kai (LW3a) – d)).</p> <p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following values being enabled by Objective 8:</p> <ul style="list-style-type: none"> <li>➤ Cultural values and uses (8c), d) &amp; g))</li> </ul>



RMA Instrument	Objective 8 Examination against the Purpose of the Act
	<ul style="list-style-type: none"> <li>➤ Individual domestic needs and stock drinking needs (8e) &amp; f))</li> <li>➤ Industrial and commercial water supply (8f))</li> <li>➤ Urban and social infrastructure facilities water supply (8f))</li> <li>➤ Freshwater use for land-based primary production (8f))</li> <li>➤ Locally significant native water bird populations and their habitats (8b))</li> <li>➤ Native fish habitat (8b))</li> </ul> <p>Objectives 25 and 27 of the RPS<sup>43</sup> (Surface water quantity and quality is suitable for sustaining or improving aquatic ecosystems) are achieved by Objective 8 of Change 9 referencing Schedule 1 and requiring the improvement of the mauri, water quality and water quantity of the Karamu and Clive Rivers and their tributaries.</p>

### 7.2.9 Objective 9

Objective 9 seeks to address Issues 1, 2, 3, 4, 5 and 8 and is as follows:

*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 **Groundwater** connected to the Ngaruroro, Tutaekuri and Karamu rivers and their tributaries so that the mauri, water quality, water quantity and groundwater levels are maintained 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;*
  - c) the maintenance of groundwater levels at an equilibrium that accounts for annual variation in climate and prevents long term decline or seawater intrusion;*
- and*
- d) contribution to water flows and water quality in connected surface waterbodies.<sup>44</sup>*

<sup>43</sup> As amended by Change 5

<sup>44</sup> Includes waterbodies like springs



Table 15 - Evaluation of Objective 9

RMA Instrument	Objective 9 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 9 seeks to promote the sustainable management of the groundwater resource connected to the TANK rivers in a manner that enables resource use so that people and communities can provide for their social, economic, and cultural well-being and for their health and safety, provided the resource is maintained. Objective 9 specifically seeks to enable the use of the groundwater resource connected to the TANK rivers for economic well-being: for domestic and municipal use (clause a), primary production and associated processing and other urban activities (clause b).</p> <p>Specifically, the cultural wellbeing of iwi / hapū is enabled by Objective 9 seeking to maintain the mauri of the groundwater resource connected to the TANK rivers.</p> <p>The direction of Objective 9 to: meet the water quality states in Schedule 1; to maintain the mauri, quality, quantity and levels of the groundwater resource connected to the TANK rivers; and to address the environmental issues in Clauses c) and d) will help achieve: RMA section 5(a) in sustaining the potential of the groundwater resource connected to the TANK rivers in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the groundwater resource connected to the TANK rivers; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>RMA section 6(e) and the relationship of Māori with water is recognised and provided for by objective 9 in general (noting the reference to the mauri of the groundwater resource connected to the TANK rivers) and clauses c) and d) in particular. The same can also be said of RMA section 7(a) kaitiakitanga and 8 the Principles of Te Tiriti o Waitangi.</p> <p>In regard to other RMA section 6 and 7 matters, the specific references in Objective 9 d) to water flows and quality in connected surface waterbodies, will help to achieve section RMA s6(c) (protection of indigenous habitats), s7(d) (intrinsic values of ecosystems) and s7(h) (the protection of the habitat of trout and salmon). The references in objective 9a) to meeting domestic water needs and municipal use 9b) to primary production and processing water, will help achieve RMA section 7(b) (efficient use and development of natural and physical resources).</p>
NPSFM	Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 9 through the use of a Te Mana o te Wai approach in the identification of values and the setting of freshwater limits and objectives applicable to the Groundwater connected to the Ngaruroro, Tutaekuri and



RMA Instrument	Objective 9 Examination against the Purpose of the Act
	<p>Karamu rivers and their tributaries specified in Schedule 1 and the matters sought to be enabled in Objective 9a) – d).</p> <p>Objectives A1 and B1 (safeguarding life-supporting capacity, ecosystem processes and indigenous species and the health of people and communities) is given effect to for the Groundwater connected to the TANK rivers and their tributaries by Change 9 Objective 9 clauses a), b), c) and g).</p> <p>Objectives A2 &amp; A3 (protecting significant values and improving freshwater quality unless regional targets are already achieved) of the NPSFM are given effect to by Change 9 Objective 9 referencing Schedule 1 and requiring the mauri, water quality and water quantity to be maintained.</p> <p>Objectives A4 &amp; B5 and Policy A7 (enabling economic well-being) of the NPSFM are given effect to by Objective 9a) &amp; b) of Change 9 in enabling sustainable use of freshwater resources for domestic and municipal needs and primary production.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) of the NPSFM is given effect to by Change 9 Objective 9 generally in providing for the use and development of land and discharge of contaminants and nutrients over the groundwater connected to the TANK rivers subject to maintaining the mauri, quality and quantity of groundwater.</p> <p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 9 in general (noting the reference to the mauri of the Groundwater).</p>
RPS including Change 5	<p>Objective 9 of Change 9 helps achieve (and give effect to) Objective LW1 'Integrated management of freshwater and land use development' and its sub clauses, in seeking to achieve the integrated and sustainable management of the groundwater connected to the Ngaruroro, Tutaekuri and Karamu rivers and their tributaries; LW1 – 2 in the mauri and water quality being improved and LW1 – 3 in recognising that surface water flows can impact on aquifer recharge.</p> <p>Objective 9a) &amp; b) help achieve LW1 – 5 (water for human and animal drinking purposes) &amp; LW1 – 6 (freshwater for production and processing of beverages, food and fibre).</p> <p>Objective LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 9 of Change 9 generally in terms of the matters listed in Objective 9a) – d) and by clearly prioritising that the water quality states specified in</p>



RMA Instrument	Objective 9 Examination against the Purpose of the Act
	<p>schedule 1 are to be met for the groundwater connected to the Ngaruroro, Tutaekuri and Karamu rivers and their tributaries.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 9 generally in seeking that the mauri of the groundwater connected to the Ngaruroro, Tutaekuri and Karamu rivers and their tributaries is maintained.</p> <p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following values being enabled by Objective 9:</p> <ul style="list-style-type: none"> <li>➤ Individual domestic needs and stock drinking needs (9a) &amp; b))</li> <li>➤ Industrial and commercial water supply (9b))</li> <li>➤ Urban and social infrastructure facilities water supply (9b))</li> <li>➤ Freshwater use for land-based primary production and processing activities (9b))</li> </ul> <p>Objectives 21 (no degradation of groundwater quality in the Heretaunga Plains aquifer system) and 22 (the maintenance or enhancement of groundwater quality) of the RPS<sup>45</sup> are given effect to by Objective 9 of Change 9 referencing Schedule 1 and requiring the improvement of the mauri, water quality, water quantity and groundwater levels are maintained for the groundwater connected to the Ngaruroro, Tutaekuri and Karamu rivers and their tributaries.</p>

### 7.2.10 Objective 10

Objective 10 seeks to address Issues 1, 2, 6 and 7 and is as follows:

*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;*

- 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;*

<sup>45</sup> As amended by Change 5



*e) contribution to improved water quality in connected surface waters;*

*and*

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

**Table 16 - Evaluation of Objective 10**

RMA Instrument	Objective 10 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 10 seeks to promote the sustainable management of the freshwater resources connected to the wetlands and lakes within the TANK catchments in a manner that enables resource use so that people and communities can provide for their social, economic, and cultural well-being and for their health and safety, provided the resource is maintained and improved. Objective 10 specifically seeks to enable the use of the freshwater resources connected to the wetlands and lakes within the TANK catchments for social and cultural well-being: to safely carry out a wide range of social and cultural activities (clause c); and collection of mahinga kai.</p> <p>Specifically, the cultural wellbeing of iwi / hapū is enabled by Objective 10 seeking to maintain and improve the mauri of the freshwater resources connected to the wetlands and lakes within the TANK catchments. The cultural wellbeing of iwi / hapū is also enabled by the protection clauses a), b), e) and f) of objective 10 and reference to cultural activities in clauses c), and d).</p> <p>The direction to: meet the water quality states in Schedule 1; to maintain and improve the mauri, quality, quantity and flows of the freshwater resources connected to the wetlands and lakes within the TANK catchments in Objective 10; and to address the environmental issues in Objective 10 Clauses a), b), e) and f) will help achieve: RMA section 5(a) in sustaining the potential of the freshwater resources connected to the wetlands and lakes within the TANK catchments in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the freshwater resources connected to the wetlands and lakes within the TANK catchments and associated ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>RMA section 6(e) and the relationship of Māori with water is recognised and provided for by objective 10 in general (noting the reference to the mauri of the freshwater resources connected to the wetlands and lakes within the TANK catchments) and clauses c), and d) in particular. The same can also be said of RMA section 7(a) kaitiakitanga and 8 the Principles of Te Tiriti o Waitangi.</p>



RMA Instrument	Objective 10 Examination against the Purpose of the Act
	<p>In regard to other RMA section 6 and 7 matters, the specific references in Objective 10a) to healthy indigenous aquatic and avian fauna populations; and 10f) to increasing the total wetland area, will help to achieve RMA sections 6(c) (protection of indigenous habitats), and 7(d) (intrinsic values of ecosystems) and 7(h) (the protection of the habitat of trout and salmon).</p>
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 10 through the use of a Te Mana o te Wai approach in the identification of values and the setting of freshwater limits and objectives applicable to freshwater connected to the wetlands and lakes within the TANK catchments specified in Schedule 1 and the matters sought to be enabled in Objective 10a) – f).</p> <p>Objectives A1 and B1 (safeguarding life-supporting capacity, ecosystem processes and indigenous species and the health of people and communities) is given effect to for the wetlands and lakes within the TANK catchments by Change 9 Objective 10 clauses a) (indigenous fauna and flora), c) (social and cultural activities of people), e) (improved water quality in connected surface water) and f) (enhanced and increased wetlands).</p> <p>Objectives A2 &amp; A3 (protecting significant values and improving freshwater quality unless regional targets are already achieved) of the NPSFM are given effect to by Change 9 Objective 10 referencing Schedule 1 and requiring the mauri, water quality and flows in the wetlands and lakes within the TANK catchments to be maintained and improved.</p> <p>Objectives A2 &amp; B4 (protecting significant values of wetlands) of the NPSFM are given effect to by Objective 10f) of Change 9 in protecting and restoring existing wetlands and creating additional wetland.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) of the NPSFM is given effect to by Change 9 Objective 10 generally in providing for the use and development of land and discharge of contaminants and nutrients in the freshwater connected to the wetlands and lakes within the TANK catchments subject to maintaining and improving the mauri, quality and flows, and levels of water.</p> <p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 10 in general (noting the reference to the mauri of the freshwater connected to the wetlands and lakes within the TANK catchments) and clauses c) (cultural activities) and d) (collection of mahinga Kai).</p>
RPS including Change 5	<p>Objective 10 of Change 9 helps achieve (and give effect to) Objective LW1 'Integrated management of freshwater and land use development' and its sub clauses, in seeking to achieve the integrated and sustainable management of the freshwater connected to the wetlands and lakes within</p>



RMA Instrument	Objective 10 Examination against the Purpose of the Act
	<p>the TANK catchments; LW1 – 2 in the mauri and water quality being improved.</p> <p>Objective 10a) &amp; f) specifically helps achieve LW1 – 1A (protecting the significant values of wetlands), LW1 – 4 (safeguarding life supporting capacity, ecosystem processes and indigenous species), LW1 – 13 (recreational and conservation values) and LW1 – 14 (promoting the preservation of natural character of wetlands and lakes).</p> <p>LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 10 of Change 9 generally in terms of the matters listed in Objective 10a) – f) and by clearly prioritising that the water quality states specified in schedule 1 are to be met for the wetlands and lakes within the TANK catchments.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 10 generally in seeking that the mauri of the wetlands and lakes within the TANK catchments is maintained and improved; and specifically in regard to 10a) in enabling healthy populations of indigenous flora and fauna (LW3d)) and 10c) and d) in enabling cultural activities, collection of mahinga kai (LW3a) – d)).</p> <p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following values being enabled by Objective 10:</p> <ul style="list-style-type: none"> <li>➤ Cultural values and uses (10c) &amp; d))</li> <li>➤ Locally significant native water bird populations and their habitats (10a))</li> <li>➤ Native fish habitat (10a))</li> </ul> <p>Policy 4A<sup>46</sup> "To use both non-regulatory and regulatory methods for protecting significant values of wetlands" is helped to be achieved by Objective 10 of Change 9 in general and by 10f) (an increase in the total wetland area by protecting and restoring existing wetland and reinstating or creating additional wetland) in particular.</p> <p>Objectives 25 and 27 of the RPS<sup>47</sup> (Surface water quantity and quality is suitable for sustaining or improving aquatic ecosystems) are achieved by Objective 10 of Change 9 referencing Schedule 1 and requiring the improvement of the mauri, water quality and water quantity of the wetlands and lakes within the TANK catchments.</p>

<sup>46</sup> As amended by Change 5

<sup>47</sup> As amended by Change 5



### 7.2.11 Objective 11

Objective 11 seeks to address Issues 1, and 2 and is as follows:

*Aquatic ecosystem health and mauri of waterbodies 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.*

Table 17 - Evaluation of Objective 11

RMA Instrument	Objective 11 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 11 seeks to promote sustainable management by allowing for people and communities to provide for their wellbeing in the use of land adjacent waterbodies in the TANK catchments by minimising adverse effects on those waterbodies through appropriate riparian management.</p> <p>Improving ecosystem health and the mauri of waterbodies through appropriate management of riparian margins by specifically providing for the environmental improvement set out in clauses a) – g) of Objective 11, will help achieve: RMA section 5(a) in sustaining the potential of the freshwater resources of the TANK catchment waterbodies in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the TANK catchment waterbodies and associated ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>In regard to RMA section 6 and 7 matters, the specific references in Objective 11b) to protect indigenous species; and 11e) to improve indigenous biodiversity, will help to achieve section RMA 6(c) (protection of indigenous habitats), and 7(d) (intrinsic values of ecosystems) and 7(h) (the protection of the habitat of trout and salmon). Specific reference in Objective 11d) to enhancing natural character and amenity will help to achieve section RMA 6(a) (preservation of natural character of wetlands, lakes and rivers and their margins), 7(c) (maintenance and enhancement of amenity values), 7(f) (maintenance and enhancement of the quality of the environment), and 7(h) (the protection of the habitat of trout and salmon).</p>



RMA Instrument	Objective 11 Examination against the Purpose of the Act
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 11 via a Te Mana o te Wai approach in recognising the connection between the ecosystem health and mauri of the waterbodies of the TANK catchments and the riparian margins of those waterbodies. Objective 11 seeks to reduce effects on, and improve, the ecosystem health and mauri of these waterbodies by appropriate management of riparian margins.</p> <p>Objectives A1 and B1 (safeguarding life-supporting capacity, ecosystem processes and indigenous species) are given effect to by Change 9 Objective 11 generally in seeking improved mauri and ecosystem health by appropriate riparian management of waterbodies in the TANK catchments and by clauses b) (improved aquatic habitat and indigenous species protection), and e) (improve indigenous biodiversity) specifically.</p> <p>Objectives A2 &amp; A3 (protecting significant values and improving freshwater quality unless regional targets are already achieved) of the NPSFM are given effect to by Change 9 Objective 11 seeking the improvement of ecosystem health and mauri of the waterbodies within the TANK catchments by appropriate riparian management.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) and Policy A3 (preventing effects of the discharge of contaminants to land that may enter water) of the NPSFM are given effect to by Change 9 Objective 11a) in seeking to reduce the effects of contaminant loss from land use activities on the waterbodies of the TANK catchments by appropriate riparian management.</p> <p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 11 in general (noting the reference to improving the mauri of the waterbodies within the TANK catchments).</p> <p>Achievement of the National Values of 'Ecosystem Health' and 'Natural form and character' of Appendix 1 of the NPSFM will be assisted by Change 9 Objective 11 in seeking improvements through appropriate management of riparian margins.</p>
RPS including Change 5	<p>Objective 11 of Change 9 helps achieve (and give effect to) Objective LW1 'Integrated management of freshwater and land use development' and its sub clauses, in seeking to achieve the integrated and sustainable management of the freshwater of the waterbodies of the TANK catchments; and LW1 – 2 in the mauri and water quality being improved; by the appropriate management of riparian margins.</p>



RMA Instrument	Objective 11 Examination against the Purpose of the Act
	<p>Objective 11a) &amp; d) specifically helps achieve: LW1 – 4 (safeguarding life supporting capacity, ecosystem processes and indigenous species), and LW1 – 14 (promoting the preservation of natural character of rivers and lakes).</p> <p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following values being enabled by Objective 11:</p> <ul style="list-style-type: none"> <li>➤ Locally significant native water bird populations and their habitats (11b, d &amp; e))</li> <li>➤ Native fish habitat (11b, e, f, &amp; g))</li> </ul> <p>Policy LW3 (manage the effects of the use of, and discharges from, land) is given effect to by Objective 11 seeking to appropriately manage riparian margins.</p> <p>The achievement of Objective 27 of the RPS<sup>48</sup> (Surface water quality is suitable for sustaining or improving aquatic ecosystems) is assisted by Objective 11 of Change 9 seeking to appropriately manage riparian margins of waterbodies in the TANK catchments.</p> <p>Objective 27A (riparian vegetation and the margins of rivers, lakes and wetlands is maintained or enhanced) is given effect to by Objective 11 of Change 9 seeking to appropriately manage riparian margins.</p>

#### 7.2.12 Objective 12

Objective 12 seeks to address Issues 1, 2, 6 and 7 and is as follows:

*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*

Table 18 - Evaluation of Objective 12

RMA Instrument	Objective 12 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	Objective 12 seeks to promote sustainable management by enabling land to be used in a manner that provides for people and communities to provide for social, cultural and economic well-being in a manner that reduces soil loss and consequential sedimentation of the waterbodies of the TANK catchments.

<sup>48</sup> As amended by Change 5



RMA Instrument	Objective 12 Examination against the Purpose of the Act
	<p>Objective 12 in reducing sedimentation of the TANK catchment waterbodies will help achieve: RMA section 5(a) in sustaining the potential of the freshwater resource in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the TANK catchment waterbodies and associated ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>In regard to RMA section 6 and 7 matters, reductions in the sedimentation of the TANK catchment waterbodies as sought by Objective 12, will help achieve: RMA section 6(a) (preservation of natural character of wetlands, lakes and rivers), 6(c) (protection of habitats of indigenous fauna), and 7(d) (intrinsic values of ecosystems) and 7(h) (the protection of the habitat of trout and salmon).</p>
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 12 via a Te Mana o te Wai approach in recognising the connection between soil loss (including contaminants) resulting from land use activities and the sedimentation of freshwater bodies and ultimately estuaries and the coastal environment; and by seeking to reduce such soil loss and sedimentation.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) of the NPSFM is given effect to by Change 9 Objective 12 in seeking to reduce soil loss (including contaminants) resulting from land use activities and the consequential sedimentation of freshwater bodies of the TANK catchments and the estuaries and coastal environment that these waterbodies flow into.</p>
RPS including Change 5	<p>Objective 12 of Change 9 helps achieve (and give effect to) Objective LW1 'Integrated management of freshwater and land use development' and its sub clauses, in seeking to achieve the integrated and sustainable management of the freshwater of the waterbodies of the TANK catchments; by seeking to reduce soil loss (including contaminants) resulting from land use activities and the consequential sedimentation of freshwater bodies.</p> <p>Policy LW3 (manage the effects of the use of, and discharges from, land) is given effect to by Objective 12 seeking to reduce contaminant loss including soil loss from land use activities.</p> <p>The achievement of Objective 27 of the RPS<sup>49</sup> (Surface water quality is suitable for sustaining or improving aquatic ecosystems) is assisted by Objective 12 of Change 9 seeking to reduce contaminant loss including soil loss from land use activities entering waterbodies in the TANK catchments.</p>

<sup>49</sup> As amended by Change 5



### 7.2.13 Objective 13

Objective 13 seeks to address Issues 1, 3, and 4 and is as follows:

*Subject to limits, targets and flow regimes established to meet the needs of the values for the waterbody, 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) Water is available for abstraction at agreed reliability of supply standards;*

*e) Water use is efficient;*

*f) Allocation regimes are flexible and responsive, allowing water users to make efficient use of this finite resource;*

Table 19 - Evaluation of Objective 13

RMA Instrument	Objective 13 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 13 seeks to promote sustainable management by allowing for people and communities to provide for their cultural, social and economic well-being in the use of freshwater resources for: essential needs (13a); domestic and municipal supply, primary production, food processing and industrial uses (13b); and for future urban and papakāinga growth needs (13c); subject to limits, targets and flow regimes.</p> <p>The limits, targets and flow regimes enable the values of a specific TANK waterbody to be met, which in turn helps achieve: RMA section 5(a) in sustaining the potential of the freshwater resource in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the TANK catchment waterbodies and associated ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>In regard to RMA section 6 and 7 matters, water quantity allocation management for the TANK catchment waterbodies under Objective 13 will help achieve: RMA section 7(b) (efficient use and development of</p>



RMA Instrument	Objective 13 Examination against the Purpose of the Act
	resources); and 7(g) (any finite characteristics of natural and physical resources).
NPSFM	<p>Objectives A4 &amp; B5 and Policy A7 (enabling economic well-being) of the NPSFM are given effect to by Objective 13 of Change 9 in enabling the use of freshwater resources for: essential needs (13a); domestic and municipal supply, primary production, food processing and industrial uses (13b); and for future urban and papakāinga growth needs (13c); subject to limits, targets and flow regimes.</p> <p>Objective C1 (integrated management of freshwater and land use in catchments) of the NPSFM is given effect to by Change 9 Objective 13 generally in enabling the use of freshwater for land use and development activities subject to limits, targets and flow regimes.</p>
RPS including Change 5	<p>Objective 13 of Change 9 helps achieve (and give effect to) Objective LW1 'Integrated management of freshwater and land use development' and its sub clauses, in seeking to achieve the integrated and sustainable management of the freshwater of the waterbodies of the TANK catchments; by setting an appropriate approach for water quantity allocation management within the TANK catchments.</p> <p>Objective 13a) &amp; b) specifically helps achieve: LW1 – 5 (recognising the regional value of freshwater for human and animal drinking purposes, and for municipal water supply). Objective 13e) &amp; f) help achieve LW1 – 9 (ensuring efficient allocation and use of water).</p> <p>Objective LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 13 of Change 9 by clearly prioritising those matters listed in 13a) – f) in water quantity allocation management.</p> <p>Policy LW1 (Catchment based integrated management) seeks a management approach that ensures under LW1j) "efficient allocation and use of freshwater ...". Objective 13e) &amp; f) helps to achieve LW1j).</p> <p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following values being enabled by Objective 13:</p> <ul style="list-style-type: none"> <li>➤ Individual domestic needs and stock drinking needs (13a))</li> <li>➤ Industrial and commercial water supply (13b))</li> <li>➤ Urban water supply for cities, townships and settlements and water supply for key social infrastructure facilities (13b))</li> </ul>



RMA Instrument	Objective 13 Examination against the Purpose of the Act
	<p>➤ Freshwater use for beverages, food and fibre production and processing and other land based primary production (13b))</p> <p>The achievement of Objective 25 of the RPS<sup>50</sup> (Surface water quantity is suitable for sustaining aquatic ecosystems, for ensuring other freshwater objectives, and ensuring resource availability...) is assisted by Objective 13 of Change 9 seeking to appropriately manage water allocation within the TANK catchments.</p>

#### 7.2.14 Objective 14

Objective 14 seeks to address Issues 1, 4 and 5 and is as follows:

*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*
- d) aquifer recharge and flow enhancement*
- e) water harvesting and storage*

Table 20 - Evaluation of Objective 14

RMA Instrument	Objective 14 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 14 seeks to promote sustainable management by allowing for the water needs of the people and communities of future generations to provide for their social, economic and cultural well-being.</p> <p>Equally Objective 14 seeks to ensure that in meeting the water needs of future generations the mauri and ecosystem health of waterbodies is secured through those measures listed in 14a) to 14e), which in turn helps achieve: RMA section 5(a) in sustaining the potential of the freshwater resource in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the TANK catchment waterbodies and associated ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p>

<sup>50</sup> As amended by Change 5



RMA Instrument	Objective 14 Examination against the Purpose of the Act
	<p>Objective 14 in providing for the water needs of the community into the future while maintaining mauri and ecosystem health in the TANK catchment waterbodies will help achieve: RMA section 6(a) (the preservation of the natural character of wetlands, lakes and rivers), 6(c) (the protection of significant habitats of indigenous fauna), 6(e) (the relationship of Māori and their culture and traditions with water), 7(a) (kaitiakitanga), 7(b) (efficient use and development of natural resources); 7(d) (intrinsic values of ecosystems), 7(f) (maintenance and enhancement of the quality of the environment), 7(g) (finite characteristics of natural resources), 7(h) (the protection of the habitat of trout and salmon), and 7(j) (benefits from the use and development of renewable energy).</p>
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 14 via a Te Mana o te Wai approach in seeking to provide for the water needs of future generations along with securing ecosystem health and mauri of the waterbodies of the TANK catchments. The following extract from the explanation of the NPSFM on 'National significance of freshwater and Te Mana o te Wai' is noted: <i>"By recognising Te Mana o te Wai...to ensure that water is available for the use and enjoyment of all New Zealanders, including tangata whenua, now and for future generations."</i><sup>51</sup> Recognising Te Mana o te Wai therefore requires consideration of future generations, which is achieved by Objective 14 of Change 9.</p> <p>Objective B1 (safeguarding life supporting capacities and ecosystems of freshwater in managing its use) is given effect to by Change 9 Objective 14 in seeking to secure the mauri and ecosystem health of the TANK catchments in providing for the water needs of future generations.</p> <p>Objective B3 and Policy B2 (provide for efficient allocation and efficient use of water) is given effect to by the measures specified in Change 9 Objective 14 clauses a) – e).</p> <p>Objective B5 (enabling economic well-being in sustainably managing water quantity) is given effect to by Change 9 Objective 14 in seeking to provide for the water needs of future generations.</p> <p>Policy B1 of the NPS in changing regional plans requires regard to be given to 'a) the reasonably foreseeable impacts of climate change'; and b) 'the connection between waterbodies'. Change 9 Objective 14 seeks to give effect to this policy in considering climate change and the potential for drier summers and creating the ability to meet the water supply needs of future generations via 14d) 'aquifer recharge and flow enhancement; and 14e) water harvesting and storage.</p>

<sup>51</sup> NPSFM, page 7.



RMA Instrument	Objective 14 Examination against the Purpose of the Act
	<p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 14 in requiring consideration of future generations water needs and for the securing of the mauri and ecosystem health of the waterbodies within the TANK catchments.</p>
<p>RPS including Change 5</p>	<p>Objective 14 of Change 9 helps achieve (and give effect to) Objective LW1 'integrated management of freshwater and land use development' and its sub clauses, in seeking to achieve the integrated and sustainable management of the freshwater of the waterbodies of the TANK catchments; by seeking to secure water availability to meet current and future water needs within the TANK catchments.</p> <p>Objective 14 specifically helps achieve: Objective LW1 – 9 (ensuring efficient allocation and use of water) of the RPS.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 14 generally in requiring consideration of future generations water needs and for securing of the mauri and ecosystem health of the waterbodies within the TANK catchments.</p> <p>Policy LW1 (Catchment based integrated management) seeks a management approach that under LW1f) "takes a strategic long-term planning outlook...to consider...uses of water resources for future generations ...". Objective 14 helps to achieve LW1f) in seeking to provide for the water needs of future generations. Objective 14e) in its reference to 'water harvesting and storage' helps achieve Policy LW1k) (enable water storage infrastructure where adverse effects can be avoided, remedied or mitigated).</p> <p>The achievement of Objective 25 of the RPS<sup>52</sup> (Surface water quantity is suitable for sustaining aquatic ecosystems, for ensuring other freshwater objectives, and ensuring resource availability...) is assisted by Objective 14 of Change 9 seeking that within the TANK catchments 'current and future water needs of future generations and for mauri and ecosystem health are secured'.</p>

<sup>52</sup> As amended by Change 5



### 7.2.15 Objective 15

Objective 15 seeks to address all issues 1 – 8 and is as follows:

*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.*

Table 21 - Evaluation of Objective 15

RMA Instrument	Objective 15 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 15 seeks to promote sustainable management by enabling communities to provide for their social, economic and cultural well-being in the collective kaitiaki and guardianship roles in the management of the freshwater resource of the TANK catchments.</p> <p>Objective 15 seeks to ensure that through 15a) – c) good practice methods in the sustainable management of the water resource occurs, which helps achieve: RMA section 5(a) in sustaining the potential of the freshwater resource in meeting the needs of future generations; 5(b) in safeguarding the life supporting capacity of the TANK catchment waterbodies and associated ecosystem resources; and 5(c) in avoiding, remedying or mitigating adverse effects on the environment.</p> <p>In regard to RMA section 6 - 8 matters, recognising kaitiaki, the use of mātauranga Māori (15a)) and marae and hapū initiatives (15c)) will help achieve: RMA sections 6(e) (the relationship of Māori and their culture and traditions with water), 7(a) (kaitiakitanga), and 8 (Te Tiriti o Waitangi). The use of good practice methods in the sustainable management of the water resource (15b)) will also help achieve RMA sections 7(b) (efficient use and development of natural resources); 7(f) (maintenance and enhancement of the quality of the environment), and 7(g) (finite characteristics of natural resources).</p>
NPSFM	Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 15 through the recognition of the kaitiaki and guardianship roles



RMA Instrument	Objective 15 Examination against the Purpose of the Act
	<p>in the management of the freshwater of the TANK catchments by tangata whenua, the Council and wider community.</p> <p>Objective CB1 (monitoring of freshwater objectives and values) of the NPSFM is given effect to by Change 9 Objective 15 in establishing an overall approach to freshwater management in the TANK catchments that recognises the importance of monitoring.</p> <p>Objective D1 (tangata whenua values and interests) and Policy D1 (reflect tangata whenua values and interests) of the NPSFM is given effect to by Change 9 Objective 15 by recognising the kaitiaki role of tangata whenua in the management of the TANK catchments; and including the use of mātauranga Māori to inform decision making and limit setting (15a)); and supporting good decision making by resource users through marae and hapū initiatives.</p>
RPS including Change 5	<p>Objective 15 of Change 9 helps achieve (and give effect to) Objective LW1 'Integrated management of freshwater and land use development' and its sub clauses, in seeking to achieve the integrated and sustainable management of the freshwater of the waterbodies of the TANK catchments; by providing kaitiaki, guardianship, collaboration and good practice in the management of freshwater within the TANK catchments.</p> <p>Objective 15c) specifically helps achieve: Objective LW1 – 8 (recognising the benefits of industry good practice to land and water management)) of the RPS.</p> <p>Objective LW3 'Tangata whenua values in management of land use and development and freshwater' is achieved by Objective 15 by recognising the kaitiaki role of tangata whenua in the management of the TANK catchments; and including the use of mātauranga Māori to inform decision making and limit setting (15a)); and supporting good decision making by resource users through marae and hapū initiatives.</p> <p>Policy LW1 (Catchment based integrated management) seeks a management approach that under LW1b) "provides for mātauranga a hapū and local tikanga values and uses of the catchment". Objective 15 helps to achieve LW1a) in working with tangata whenua in recognising their kaitiaki role; in 15a) the use of mātauranga Māori; and in 15c) marae and hapū initiatives; in the freshwater management of the TANK catchments. Change 9 Objective 15 also helps achieve RPS Policy LW1e) (collaboration and information sharing between agencies, iwi, landowners and other stakeholders); and LW1gA) (working collaboratively with the catchment communities)</p>

RMA Instrument	Objective 15 Examination against the Purpose of the Act
	RPS Policy LW4 (the use of non-regulatory methods, in support of regulatory methods, for managing freshwater) is given effect to by Objective 15. In particular LW4a) (research, investigation and the provision of information and services) is helped to be achieved by Objective 15a); LW4b) (advocacy, liaison and collaboration) is helped to be achieved by Objective 15 in general; and LW4e) (Industry good practice) is helped to be achieved by 15c).

### 7.2.16 Objective 16

Objective 16 seeks to address Issue 8 and is as follows:

*The effects of climate change in respect of each of the following are taken in 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).*

**Table 22 - Evaluation of Objective 16**

RMA Instrument	Objective 16 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	Objective 16 seeks to promote sustainable management by allowing for people and communities to provide for their social, economic and cultural well-being in the use of freshwater resources provided the effects of climate change are considered. This also helps achieve RMA section 5(2)(a) in sustaining the potential of the TANK water resources to meet the needs of



RMA Instrument	Objective 16 Examination against the Purpose of the Act
	<p>future generations; and 5(2)(c) in avoiding, remedying or mitigating any adverse effects of activities on the environment.</p> <p>In taking into account the effects of climate change, Objective 16 will help achieve RMA: sections 6(h) (management of significant risks from natural hazards); 7(i) (the effects of climate change).</p> <p>Objective 16a) seeks to ensure climate change effects on aquatic ecosystems, indigenous biodiversity and freshwater bodies are taken into account, which in turn will help to achieve RMA: sections 5(2)(b) (life-supporting capacity of water and ecosystems), 6(c) (protection of significant habitats of indigenous fauna), 7(d) (intrinsic values of ecosystems), 7(f) (maintenance and enhancement of the quality of the environment), and 7(h) (the protection of the habitat of trout and salmon).</p> <p>Objective 16a) also seeks to ensure climate change effects on water supply and human health, primary production and infrastructure are taken into account, which in turn will help to achieve RMA sections 7(b) (efficient use and development of resources); and 7(g) (any finite characteristics of natural and physical resources).</p>
NPSFM	<p>Policies A1 and B1 of the NPSFM require that in changing regional plans to establish freshwater objectives having regard to the reasonably foreseeable impacts of climate change. Objective 16 seeks to ensure that the effects of climate change are taken into account in making decisions about land and water management within the TANK catchments.</p>
RPS including Change 5	<p>Objective 16 of Change 9 helps achieve (and give effect to) Objective LW1 'Integrated management of freshwater and land use development' and its sub clauses, in seeking to achieve the integrated and sustainable management of the freshwater bodies of the TANK catchments; by seeking that the effects of climate change are taken into account in making decisions about land and water management within the TANK catchments.</p> <p>Policy LW1 (Catchment based integrated management) seeks a management approach that under LW1f) "takes a strategic long term planning outlook...to consider...uses of water resources for future generations ...". Objective 16 helps to achieve LW1f) in seeking that the effects of climate change are taken into account in making decisions about land and water management within the TANK catchments.</p>



RMA Instrument	Objective 16 Examination against the Purpose of the Act
	The achievement of Objective 25 of the RPS <sup>53</sup> (Surface water quantity is suitable for sustaining aquatic ecosystems, for ensuring other freshwater objectives, and ensuring resource availability... while recognising the impact caused by climatic fluctuations in Hawke's Bay) is assisted by Objective 16 of Change 9 seeking that within the TANK catchments 'the effects of climate change are taken into account'.

### 7.2.17 Objective 17

Objective 17 seeks to address Issues 1, 2, 3 and 7 and is as follows:

*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.*

Table 23 - Evaluation of Objective 17

RMA Instrument	Objective 17 Examination against the Purpose of the Act
Section 5 purpose of RMA and sections 6, 7 & 8	<p>Objective 17 seeks to promote sustainable management by enabling people and communities to provide for their social, economic and cultural well-being and for their health and safety in the use of freshwater resources from registered drinking water supplies.</p> <p>This also helps achieve RMA sections: 5(2)(a) in sustaining the potential of source water resources for Registered Drinking Water Supplies to meet the needs of future generations; 5(2)(b) in safeguarding the life supporting capacity of those water resource; and 5(2)(c) in avoiding, remedying or mitigating any adverse effects of activities on the source water for Registered Drinking Water Supplies.</p> <p>In regard to RMA section 6 - 8 matters, Objective 17 in ensuring that Registered Drinking Water Supplies remain fit for human consumption helps achieve RMA sections 7(b) (efficient use and development of natural resources); 7(f) (maintenance and enhancement of the quality of the environment), and 7(g) (finite characteristics of natural resources). Protecting the source water of Registered Drinking Water Supplies for human consumption is also consistent with sections 7(a) kaitiakitanga and 8 the principles of the Treaty of Waitangi.</p>

<sup>53</sup> As amended by Change 5



RMA Instrument	Objective 17 Examination against the Purpose of the Act
NPSFM	<p>Objective AA1 (Te Mana o te Wai) of the NPSFM is given effect to by Change 9 Objective 17 by protecting source water for Registered Drinking Water supplies from the effects of activities to provide for Te Hauora o te Tangata (the health of the people).</p> <p>Objectives A1 and B1 (safeguarding life-supporting capacity, and the health of people and communities) is given effect to by Change 9 Objective 17 by protecting source water for Registered Drinking Water supplies from the effects of activities.</p> <p>Objective A4 (enable communities to provide for their economic well-being...in sustainably managing freshwater quality) of the NPSFM is given effect to by Change 9 Objective 17 by still providing for activities within Source Protection Zones, provided that those activities do not adversely affect Registered Drinking Water supplies. In turn, the protection of those drinking water supplies as being fit for human consumption will also enable the community served by such supplies to provide for their economic well-being.</p> <p>Objective C1 and Policy C1 (integrated management) of the NPSFM are given effect to by Objective 17 of Change 9 in enabling land use activities and the use of freshwater resources provided that those activities do not adversely affect Registered Drinking Water supplies.</p>
RPS including Change 5	<p>Objective 17 of Change 9 helps achieve (and give effect to) Objective LW1 'Integrated management of freshwater and land use development' and sub clause 5 (recognising the regional value of freshwater for human drinking purposes and municipal supply), in seeking to achieve the integrated and sustainable management of the groundwater within source protection zones for Registered Drinking Water supplies; LW1 – 3 in recognising that land uses can impact on aquifer recharge; and LW1 – 4 in safeguarding the life supporting capacity of freshwater.</p> <p>Objective LW2 'Integrated management of freshwater and land use development – balancing and prioritising competing values' is achieved by Objective 17 of Change 9 prioritising the availability of safe drinking water in source protection zones.</p> <p>Policy LW2 Table 1 (Prioritising Values) is given effect to by the following primary value for the TANK catchment area being enabled by Objective 17:</p> <ul style="list-style-type: none"> <li>➤ Urban water supply for cities, townships and settlements and water supply for key social infrastructure facilities.)</li> </ul>



RMA Instrument	Objective 17 Examination against the Purpose of the Act
	Objectives 21 (no degradation of groundwater quality in the Heretaunga Plains aquifer system) and 22 (the maintenance or enhancement of groundwater quality) of the RPS <sup>54</sup> are given effect to by Objective 17 of Change 9 seeking to ensure that activities in source protection zones do not cause water in these zones to become unsuitable for human consumption.

### 7.3 OBJECTIVES ASSESSMENT CONCLUSION

Considering the assessment above, it is considered that the objectives of the Change 9 are the most appropriate way to achieve the purpose of the RMA.

<sup>54</sup> As amended by Change 5



## 8. APPROPRIATENESS OF PROVISIONS

### 8.1 GROUPING OF PROVISIONS

For the purposes of evaluation, the provisions have been grouped into topics as set out below. This approach has been taken to the grouping of provisions for evaluation purposes as these are considered the key regulatory themes of Change 9 and to keep this report to a manageable level of detail, it is not appropriate to evaluate each provision individually.

Due to the interrelated nature of the issues, objectives and policies, the provisions proposed to address them are an interrelated package. It is therefore important to consider the evaluation of the various topics as a whole.

For the purposes of this report, the evaluation of the appropriateness of the provisions for achieving the objectives are grouped on the basis of the following rules, with the relevant policies discussed with each group of rules.

**Table 24 – Provision Topics for Evaluation**

Topic	Grouping of Rules
1. Production Land Use Activities	TANK 1 – TANK 4a and amendments to Existing RRMP 7 relating to cultivation
2. Riparian Management	Amendments to Existing RRMP 7 and RRMP 71
3. Land Drainage & Wetland Management	Amendments to Existing RRMP 32 & 33; and New RRMP 33A
4. High Flow Takes, Damming & Storage	TANK 11, 12, 13, 13A & 14
5. Stormwater	STORMWATER 1 – 4
6. Water Takes	TANK 5, 6, 7, 8, 9, & 10
7. Transfer of Permits	Amendments to Existing RRMP 61 & 62; and New RRMP 62A
8. Source Protection Zone Rules	Amendments to Existing RRMP 1, 2, 3, 5, 6, 12, 13, 14, 15, 16, 37, 40, 48 & 49; and proposed provisions within TANK 2, 3, 4, 7 & 8 and STORMWATER 2, 3 and 4



## 8.2 PRODUCTION LAND USE ACTIVITIES

### 8.2.1 Introduction

The provisions assessed in this category include the TANK 1, 2, 3, 4 & 4a and RRMP 7 rules which relate to Production Land Use Activities and include regulation: requiring TANK Industry Programmes / TANK Catchment Collectives / Farm Environment Plans; restricting stock access to the bed of any river, lake or wetland; on sedimentation control; and on Change of Use involving Nitrogen loss.

The Glossary of Terms in Change 9 includes the following relevant definitions:

*'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.*

*'Farm Environment Plan' means a plan that has been prepared in accordance with the requirements of Schedule 1C (sic) 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.*

Schedule 3 'Priority Catchments' sets out thresholds for determining whether a catchment is high, medium or low priority for implementing Farm Environment and Catchment Collective Plans and Industry Programmes. Timeframes are set for completion of such plans with 3 years given for high priority catchments and 9 years given for low priority catchments.

Schedule 4 'Land Use Change' sets out anticipated nitrogen loss by land use type and per property thresholds for 'nitrogen loss change'.

Schedule 5 'Landowner Collective, Industry Programme and Farm Environment Plan' comprises the requirements for each of these production land use management tools.

Production Land Use Activities within the TANK catchments are not currently regulated (in regard to sediment and nutrient loss) by the rules of the RRMP. Such rules are however in place within the Tukituki catchment as a result of Change 6. As set out below, such rules are now required to enable the Council to meet its obligations under the NPSFM to improve freshwater quality and improve integrated management of freshwater; and the



use and development of land. Such provisions are also required to give effect to Change 5 to the RPS as is further explained below.

In seeking to meet the obligations of these higher order documents the TANK Group's approach is set out in a document titled 'Discussion Paper – for TANK 19<sup>th</sup> April 2018 Reducing Nutrient Losses to Water – Water Quality Attribute States'. That document establishes the issues to be addressed which are summarised in the Executive Summary as follows:

- *The freshwaters of the TANK catchments have variable concentrations of nutrients which can affect their freshwater values. In some rivers, nutrients will affect algal growth and impact on the community values like mauri, swimming and ecosystem health. Guidelines are available that indicate where risk of increased algal growth is likely*
- *Where rivers are dominated by macrophyte growth, there are complex relationships between plant growth and ecosystem health and there are currently no guidelines available in relation to managing nutrient concentrations for values affected by macrophyte growth in those rivers.*
- *The nutrients in freshwaters also contribute a load to the Waitangi and Ahuriri estuaries and are contributing to a poor ecosystem state there. However further research is required to understand nutrient limits for the estuary and what an appropriate load to maintain estuary ecosystem health would be.*
- *Nutrient concentrations within the Ngaruroro and Tutaekuri mainstems are actually low, although the higher flows means the total load to the estuary is comparatively high. By contrast, many of the lowland streams in the Karamu catchment have higher nutrient concentrations although their lower flows means total loads to the estuary are lower. Developing an allocation limit for nutrients as well as an equitable property scale allocation regime is very complex in these circumstances.*

The overall proposed approach to regulating Production Land Use Activities to address nutrient concentrations in the freshwater bodies of the TANK Catchments is also summarised in the executive summary of the TANK April 2018 Discussion Paper, which includes the following:

*The TANK Group acknowledge the importance of managing nutrient concentrations in rivers to protect instream values and the need to reduce nutrient loads to the estuary. There is still further research and investigation necessary to determine a defensible nutrient load limit, both for freshwater health and the estuaries health. However, in the interim, the TANK Group will determine appropriate objectives for concentrations of nutrients within freshwaters and will adopt measures to ensure nutrient losses from land use activities are reduced. There will be an initial focus on catchments where nutrient concentrations are not meeting the desired states in a priority order.*

*A staged approach that recognises the need to reduce nutrient losses but still account for the scientific uncertainties, ecosystem complexities and the social and*



*economic challenges involved in establishing a property nutrient discharge allowance is being proposed.*

In putting forward the Productive Land Use Activity provisions the TANK Group stated<sup>55</sup>:

*The TANK Group wishes to maintain or improve (where degraded) water quality and aquatic ecosystem health in rivers and in estuaries and coastal environments affected by inputs to freshwater from activities carried out in the contributing catchments. By these actions it also wishes to maintain or improve economic, social and cultural wellbeing for the community and for future generations.*

*The primary way in which these outcomes are to be achieved is by communities, industry groups and individual land users working collectively through clear and accountable initiatives involving sustainable good practice, adaptive management and audited self-management programmes. Regulation will also be required to underpin these initiatives.*

## 8.2.2 Statutory Context

### 8.2.2.1 Resource Management Act 1991 (RMA)

The Production Land Use Activity provisions of Change 9 seek to enable the farming and grower communities to provide for their economic well-being while meeting the environmental protection clauses of RMA section 5(2)(a)-(c). These provisions also seek to have regard to sections 7 (a) kaitiakitanga; (b) the efficient use and development of natural and physical resources; (d) intrinsic values of ecosystems; (f) maintenance an enhancement of the quality of the environment; and (h) the protection of habitat of trout and salmon.

The Council has a number of functions under section 30(1) of the RMA that are relevant to the Production Land Use Activity aspect of Change 9.. They include:

- Establishing, implementing and reviewing objectives, policies and methods to achieve integrated management of the natural and physical resources of the region (section 30(1)(a)).
- Preparing objectives and policies in relation to any actual or potential effects of the use, development or protection of land which are of regional significance (section 30(1)(b)).
- The control of the use of land for the purpose of (section 30(1)(c)):
  - soil conservation (i);
  - the maintenance and enhancement of the quality of water in water bodies (ii), and

<sup>55</sup> Draft management proposal V7 February 2018; Presentation to TANK 19<sup>th</sup> April 2018



- the maintenance and enhancement of ecosystems in water bodies (iii);
- The control of discharges of contaminants into or onto land or water, and discharges of water into water (section 30(1)(f)).
- If appropriate, setting rules in a regional plan to allocate the water quality. i.e. the capacity of water to assimilate a discharge of a contaminant (section 30(1)(fa)(iv))

#### 8.2.2.2 National Policy Statement for Freshwater Management 2014 (NPSFM)

The NPSFM (as summarised in section 3.4.1 of this report above) requires values and attributes to be assigned to Freshwater Management Units (FMUs) by engagement with the community including tangata whenua. The NPSFM includes two compulsory values, ('ecosystem health' and 'human health for recreation') and a list of optional 'other national values' that may be assigned to FMUs, including:

- *Natural form and character;*
- *Mahinga kai*
- *Fishing*
- *Irrigation, cultivation and food production*
- *Animal drinking water*
- *Water supply*
- *Wai tapu*

These values can all be relevant to Production Land Use Activities and / or the effects of Production Land Use Activities.

Objective A1 of the NPSFM reflects the above-mentioned compulsory values in requiring the safeguarding of the life supporting capacity of freshwater and the health and safety of communities as affected by contact with fresh water in sustainably managing the use of land and discharge of contaminants.

Objective A2 of the NPSFM requires the overall quality of fresh water within the TANK catchments to be maintained or improved. In many locations within the TANK catchments water quality is below the objective levels set in Schedule 1 of Change 9.

Policy A3(b) enables Councils to make rules requiring the adoption of the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of any discharge which may enter water. For Production Land Use Activities, this is particularly relevant, as there may be limited practicable options to mitigate non-point source discharges currently available without comprehensive farming system changes.

Objective C1 and Policy C1 of the NPSFM require regional councils to improve integrated management of freshwater and the use and development of land.



### 8.2.2.3 Regional Policy Statement (RPS)

Objective LW1 requires that *"Freshwater and the effects of land use and development are managed in an integrated and sustainable manner..."* Policy LW1 seeks to implement that objective through 'catchment based integrated management'. Of specific relevance to the management of Land Based Production Activities, clause (1) of this policy requires that adoption of an approach for each catchment area that:

- 1.b) provides for mātauranga a hapū and local tikanga values and uses of the catchment;
- 1.c) provides for the inter-connected nature of natural resources within the catchment area, including the coastal environment;
- 1.e) promotes collaboration and information sharing between relevant management agencies, iwi, landowners and other stakeholders;
- 1.f) takes a strategic long term planning outlook of at least 50 years to consider the future state, values and uses of water resources for future generations;
- 1.g) aims to meet the differing demand and pressures on, and values and uses of, freshwater resources to the extent possible;
- 1.gA involves working collaboratively with the catchment communities and their nominated representatives;
- 1.h) ensures the timely use and adaptation of statutory and non-statutory measures to respond to any significant changes in resource use activities or the state of the environment;
- 1.iE recognises and provides for existing use and investment;

Policy LW1(2)(e) requires that regional plans set out how the groundwater and surface water quality and quantity limits and targets will be implemented through regulatory or non-regulatory methods including specifying timeframes for meeting water quality and allocation targets.

Policy LW1(4) sets out matters to be given regard when setting methods and timeframes to achieve limits and targets as follows:

- a) allowing reasonable transition times and pathways to meet any new water quantity limits or new water quality limits included in regional plans. A reasonable transition time is informed by the environmental and socio-economic costs and benefits that will occur during that transition time, and should include recognition of the existing investment; and
- b) promoting and enabling the adoption and monitoring of industry-defined and Council approved good land and water management practices.

Policy LW2 includes:

- ...1. Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3: a) Greater Heretaunga / Ahuriri Catchment Area;...



3. When managing the freshwater bodies....: a) recognise and provide for the primary values and uses identified in Table 1;...

The primary values for the TANK catchments, which in Table 1 are referred to as the Greater Heretaunga / Ahuriri Catchment Area, include values that are enabling of Land Based Production Activities, being:

- Freshwater use for beverages, food and fibre production and processing and other land based primary production
- Individual needs and stock drinking needs

Along with values dependent on freshwater quality, including:

- Any regionally significant native bird populations and their habitats
- Cultural values and uses...
- Native fish habitat in the Ngaruroro River and Tutaekuri River catchments
- Trout spawning habitat.

The most specific policy in Change 5 to Production Land Use Activities is LW3:

1. To manage the effects of the use of, and discharges from, land so that:
  - a) the loss of nitrogen from land to groundwater and surface water, does not cause catchment area or sub-catchment area limits for nitrogen set out in regional plans to be exceeded;
  - b) the discharge of faecal matter from livestock to land, and thereafter to groundwater and surface water, does not cause faecal indicator bacteria water quality limits for human consumption and irrigation purposes set out in regional plans to be exceeded;
  - c) the loss of phosphorus from production land into groundwater or surface water does not cause limits set out in regional plans to be exceeded.
- 1A. To provide for the use of audited self management programmes to achieve good management of production land.
2. To review regional plans and prepare changes to regional plans to promote integrated management of land use and development and the region's water resources.

Finally, the following objectives of the RPS component of the RRMP relating to surface water are also particularly relevant to the Production Land Use Activities provisions of Change 9:

*OBJ 27 The water quality in rivers, lakes and wetlands is suitable for sustaining or improving aquatic ecosystems, and for other freshwater objectives identified in accordance with a catchment-based process as set out in Policy LW1 and Policy LW2, including contact recreation purposes where appropriate.*

*OBJ27A Riparian vegetation on the margins of rivers, lakes and wetlands is maintained or enhanced in order to: a) maintain biological diversity; b) maintain and*



*enhance water quality and aquatic ecosystems; and c) support the use of surface water resources in accordance with tikanga Māori.*

### 8.2.3 Relevant Objectives of Change 9

Given the statutory context provided above, including the specific requirements of the RPS (via Change 5), it is those objectives relating to water quality protection, land use, collaboration and kaitiakitanga that are particularly relevant to the Production Land Use Activity provisions. Therefore, the evaluation of the appropriateness of the provisions should be against the following relevant Change 9 objectives: 1, 2, 3, 12, and 15 (see section 7.2 above). Objective 12 is the most specific objective to the management of Land Use Production Activities and for convenience is quoted as follows:

*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*

### 8.2.4 Overview of Practicable Options

Prior to establishing practicable options, the following discussion discounts why some potential options cannot be considered further.

#### 8.2.4.1 Status Quo

It is typical in a section 32 evaluation to consider the status quo provisions as a reasonably practicable option. Given the statutory context set out above however, the status quo RRMP rules do not provide for the integrated management of freshwater and the effects of land use on a catchment basis for the TANK catchments, so are not a reasonably practicable option for giving effect to the RPS component of the RRMP (Change 5, Objective LW1).

#### 8.2.4.2 Options Considered for Mitigating the Water Quality Effects of Production Land Use Activities

The TANK group considered a variety of options for mitigating the effects of Production Land Use Activities on water quality in order to achieve the objectives set out in Schedule 1 of Change 9. The options that have been considered are set out in Table 25 below, as is recorded in the TANK April 2018 Discussion Paper.

Table 25 – Options for Mitigating the Effects of Production Land Use Activities<sup>56</sup>

Option	Description
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<sup>56</sup> TANK 19<sup>th</sup> April 2018 Reducing Nutrient Losses to Water – Water Quality Attribute States' (Table 1 & Attachment 1).



1. Nutrient modelling and limits at a property scale required over whole of catchment.	Baseline discharge levels established for future management. Rules based on nitrogen leaching rates not exceeding limits set to improve water quality. This being the approach used in the Tukituki Catchment (RRMP rules TT1 – TT2A). There are however a variety of alternative options for determining a property scale Nitrogen Discharge Allowance (NDA). These are set out as the following Option 1 sub-options.
1A Allocation to properties based on Land Use Classification (LUC).	Limiting nitrogen losses per property for NDA based on the LUC of the property. This is the approach used for the Tukituki catchment in RRMP Rules TT1 – TT2A.
1B Proportional Reduction based on existing nutrient loss.	Requires establishment of existing nitrogen discharge baseline for each property. NDA based on a proportional reduction of existing level.
1C Catchment Average.	Allocate the same nutrient loss allowance per hectare over a given catchment area so that the cost of mitigation is equitable on a per hectare basis.
1D Land Cover or Sector Average.	Specific land uses are allocated the same nutrient allowance to achieve target overall reduction in nutrient loss.
1E Nutrient Vulnerability	Property allowance calculated based on nutrient leaching / retention capacity. More allowance is available to land with a lower risk of leaching and vice versa.
1F Cap and Trade	An allocation limit is established and distributed amongst property owners. A base allowance would be established with the remainder of existing losses subject to a trading regime or offset requirements. The Taupo and Rotorua lakes are being managed with variations of this approach.
2. Staged, adaptive management approach focussed on desired environmental outcomes	A multi-pronged approach focussing on improving trends in water quality attributes. Includes identification of key management practices aimed at reducing nitrogen loss and the adoption of monitoring and auditing systems. The approach would involve collaboration with industry groups with a focus on reducing nutrient loads in the Ahuriri and Waitangi estuaries. Nutrient losses in the rivers would include sediment loss and stock exclusion rules.



3.A targeted regulatory regime focusing on specific activities in specific areas.

This approach would be based on only regulating activities with the greatest potential for nitrogen loss in those areas where reductions in nutrient levels are required to enable water quality objectives to be met.

4. An audited self-management programme with nitrogen mitigation measures specified.

Reliance on industry groups to establish programmes amongst member to mitigate nutrient loss. Those programmes would then be audited for compliance.

#### 8.2.4.3 Challenges with Nutrient Limit Options (Option 1 – 1F & 3)

It is clear from HBRC monitoring data that nutrient loads to the estuaries (Ahuriri and Waitangi) are contributing to poor estuary health, however there are currently no accurate modelling tools or guidelines that enable justifiable load limits to be set for either of the estuaries.<sup>57</sup> It follows that it is therefore difficult to extrapolate a permitted nutrient loss limit from land based production activities on a per property or per activity basis that is justified by environmental benefits.

Another issue in considering nutrient or nitrogen loss limits is whether they should be based on a total load in a water body or the concentration in the water body. For example, load contributions to the Waitangi Estuary from the Ngaruroro River will be higher than for other rivers and streams due to the high volume of flow from that river, even though the concentration of nutrients in the water will be much lower when compared to smaller lowland rivers such as the Karamu. If a nutrient limit approach were to be adopted, the burden of reducing nitrogen losses would fall unevenly across the catchments depending on whether concentrations or loads were used to determine nitrogen allocation limits.<sup>58</sup> Figure 4 below illustrates this issue.

<sup>57</sup> TANK 19<sup>th</sup> April 2018 Reducing Nutrient Losses to Water – Water Quality Attribute States' (paragraph 18).

<sup>58</sup> Ibid (paragraph 15).



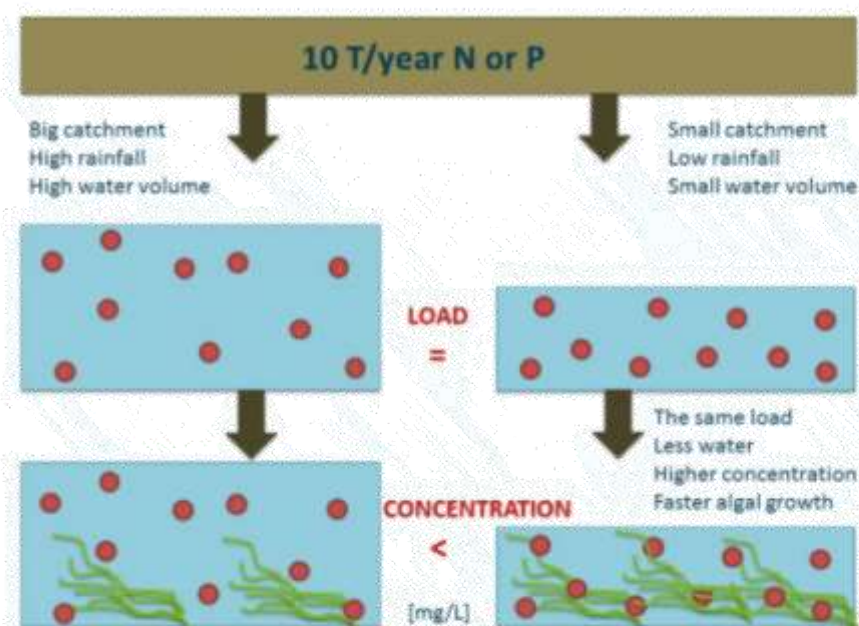


Figure 4 – Relationship between Nutrient Concentration and Flow (S Haidekker)<sup>59</sup>

Macrophyte growth has been identified as an ecosystem health concern in the lowland streams of the TANK catchments. Although these streams generally also have high dissolved nutrient concentrations, existing research indicates that ecosystem health would be better improved if dissolved oxygen was increased and water temperatures were decreased. Reducing macrophyte growth would increase oxygen levels, but reductions in nutrients will not result in corresponding decreases in macrophyte growth as rooted plants will access nutrients from the sediments in which they grow. Science advice to the TANK Group was that riparian planting and consequential shading of rivers and streams will best reduce macrophyte growth as well as providing the additional benefits of reduced water temperatures in summer, reduced stream bank erosion, reductions in contaminants entering water from adjacent land and improved biodiversity.<sup>60</sup>

Science advice provided to the TANK Group in considering options for Change 9, is that total nutrient loads to the estuaries need to be reduced for better ecosystem health, but while better tools and estuary guidelines are developed, an adaptive approach that focusses on decreasing nitrogen inputs should be adopted.<sup>61</sup> Therefore, rather than

<sup>59</sup> Ibid (paragraph 16, Figure 4)

<sup>60</sup> Ibid (paragraph 21)

<sup>61</sup> Ibid (paragraph 19).

having any specific nitrogen allocation limits per property for Land Based Production Activities, Plan Change 9 has adopted an approach of seeking reductions in nitrogen loss, while gathering data for more definitive limits in the future.

#### 8.2.4.4 Costs and Benefits of Reasonably Practicable Options

Table 26 below provides a brief summary of the costs and benefits of the options identified in Table 25 above, which is further to the challenges identified with the nutrient allocation setting options as outline above.

**Table 26 – Summary Table of Costs and Benefits of Reasonably Practicable Options**

Option	Costs	Benefits
1A Allocation to properties based on Land Use Classification (LUC).	<p>Complex to assess for each property and therefore high establishment costs.</p> <p>No water quality rationale for Nitrogen Discharge Allocation allowance for each LUC.</p> <p>LUC not developed to manage water quality.</p> <p>Application elsewhere illustrating that amendments to Overseer<sup>62</sup> are required and a lack of flexibility is already causing problems with implementation.</p>	<p>The Horizons and Tuktuki approach. Sometimes referred to as proxy for 'natural capital'. Would enable general constancy in approach in RRMP with Tuktuki Catchment rules.</p> <p>Measurable and specific allocations provide certainty to land user.</p>
1B Proportional Reduction based on existing nutrient loss.	<p>A 'grand-parenting option'<sup>63</sup> - requires extensive data collection, assessment and on-going monitoring to set baseline and keep track of land use changes.</p> <p>Grand-parenting options generally not favoured where existing land use has lower NDA<sup>64</sup>.</p> <p>Costs of reduction will vary considerably depending on land use</p>	<p>Effects based in requiring greater reductions in nutrients from activities with the highest existing nutrient losses.</p> <p>Measurable and specific allocations provide certainty to land user.</p>

<sup>62</sup> A computer generated model for annual farm nutrient budgets.

<sup>63</sup> Means a nutrient loss baseline is established from a specific date.

<sup>64</sup> Nutrient Discharge Allocation



1C Catchment Average.	<p>Does not account for existing use/investment in activities that may be already exceeding the required average.</p> <p>Does not account for soil types and existing mitigations which may reduce nitrogen loss risks from one property compared to another in the same catchment.</p> <p>High establishment costs.</p>	<p>Equitable on a per hectare basis.</p> <p>Measurable and specific allocations provide certainty to land user.</p>
1D Land Cover or Sector Average.	<p>Grand-parenting options generally not favoured where existing land use has lower NDAs.</p> <p>Inequitable between land uses.</p> <p>High establishment costs.</p>	<p>"Grandparents" existing use – an advantage to already high loss land uses.</p> <p>Measurable and specific allocations provide certainty to land user.</p>
1E Nutrient Vulnerability	<p>There are no readily available tools that predict land use vulnerability to N loss.</p> <p>High establishment costs.</p>	<p>Enable high N loss activities where risk to water quality is lower.</p> <p>Measurable and specific allocations provide certainty to land user.</p>
1F Cap and Trade	<p>Complex to establish and operate. Relies on one of the NDA regime options 1A -1E above.</p>	<p>Uses a market mechanism to move nutrient losses between land uses/sectors.</p>
2. Staged, adaptive management approach focussed on desired environmental outcomes	<p>Does not provide certainty that water quality objectives will be met within specific timeframes.</p> <p>Does not necessarily involve collection of better data</p> <p>Does not provide a specific allocation mechanism.</p> <p>Targeting specific land uses and locations may result in inequitable distribution of mitigation costs.</p> <p>Exact nature of existing and future mitigation measures may not be as precisely understood across all land use systems as the level of nitrogen loss is not always accurately known.</p>	<p>Enables flexibility and innovation in meeting environmental outcomes where there are complex ecosystem relationships.</p> <p>Allows mitigations to be tried without adverse regulatory responses</p> <p>Enables targeting of mitigation where it is most cost effective.</p> <p>Allows development of innovative mitigation measures (especially in relation to new information such as that about the effects of tile drains).</p> <p>Allows for flexible (adaptive) management responses depending on monitored outcomes and as a result of new mitigation research.</p>



		Allows for complex natural processes to be taken into account in meeting freshwater objectives
3.A targeted regulatory regime focusing on specific activities in specific areas.	May result in arbitrary choices for mitigation requirements. May result in expenditure on works not likely to improve environmental outcomes.	Could allow focus on areas where environmental outcomes not being met.
4. An audited self-management programme with nitrogen mitigation measures specified.	Not all land uses are covered by programmes that could lend themselves to further development for this approach  Requires a decision to be made about the level of mitigation required – equity between industry groups may be an issue	Expectations and performance are clear.  Could build on existing programmes and reduce compliance costs for landowners

#### 8.2.4.5 Adoption of Option 2 Staged, Management Approach

The collaborative decision-making process undertaken by the TANK Group resulted in Option 2 being decided upon to form the approach for the management of Production Land Use activities in Change 9. In agreeing to this approach, the TANK Group are specifically seeking the following key approaches<sup>65</sup>:

- *Some water bodies do not meet the required water quality states and need to be the focus of further management attention;*
- *Agreement that one size will not fit all locations / activities;*
- *A priority approach to management based on –*
  - *Locations where water quality is not being met*
  - *Focus on stressors and pathways that have the biggest effect on ecosystem health and water quality*
  - *Measures targeted at specific practices (site specific and through rules)*
  - *Milestones for key deliverables*
- *A delay to the development of a property nutrient allocation regime dependent on –*

<sup>65</sup> Agenda Item 7 to Regional Planning Committee, TANK (PC9) Plan Change and Decisions on Plan Change Matters, Hawke's Bay Regional Council, 31 October 2018.



- Better information about catchment load limits, particularly in relation to estuary health.
- Better information to support development of an equitable nutrient allocation methodology
- To regulate land use change where there is a risk that annual nitrogen losses will increase as a result of land use change.

Table 27 sets out how these approaches for managing the effects of Production Land use Activities have been implemented as regional plan provisions in the form of policies, rules and schedules within Change 9.

**Table 27 – Land Based Activity Provisions Included in Change 9**

Ref	Provision / Provision Summary	Category for Evaluation of Effectiveness & Efficiency
Policies		
14	<p>The Council will address the risks to human health and dogs from toxic phormidium by;</p> <ul style="list-style-type: none"> <li>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;</li> <li>b) Adopting applicable national guidelines for the monitoring and management of toxic algae;</li> <li>c) Supporting national investigations into the incidence of toxic phormidium, the reasons for its establishment and measures to reduce the incidence;</li> <li>d) reducing nutrient and sediment inputs in accordance with Policies 15 and 16;</li> <li>e) maintain flushing flow</li> <li>f) ensuring the public has information about phormidium risk, including as a result the accumulation of toxic algal mats.</li> </ul>	Adaptive approach to nutrient and contamination management.
15	<p>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;</p> <ul style="list-style-type: none"> <li>a) establish programmes and processes through Farm Environment Plans, Catchment Collectives and Industry Programmes to ensure land managers; <ul style="list-style-type: none"> <li>(i) adopt industry good practice;</li> <li>(ii) identify critical source areas of contaminants at both property and catchment scale;</li> <li>(iii) adopt effective measures to mitigate or reduce contaminant loss;</li> </ul> </li> </ul>	Adaptive approach to nutrient and contamination management.



	(iv) prepare nutrient management plans in catchment not meeting targets for dissolved nitrogen.	
16	<p>The Council will achieve or maintain the freshwater targets or objectives in Schedule 1 by;</p> <p>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;</p> <p>b) regulating land use change where there is a significant increased risk of nitrogen loss;</p> <p>c) gathering and assessing information about environmental state and trends and the impact of land use activities on these;</p> <p>d) working with industry groups, landowners and other stakeholders to undertake research and investigation into;</p> <p>(i) nutrient pathways, concentrations and loads in rivers and coastal receiving environments;</p> <p>(ii) nutrient uptake and loss pathways at a property scale;</p> <p>(iii) measures to reduce nutrient losses at a property as well as catchment scale including those delivered through industry programmes</p>	Adaptive approach to nutrient and contamination management.
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.	Adaptive approach to nutrient and contamination management.
18	<p>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;</p> <p>a) regulating cultivation, stock access and vegetation clearance activities;</p> <p>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;</p> <p>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;</p> <p>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;</p> <p>(i) targeting resources where multiple objectives can be met;</p>	Sediment Management / Stock Exclusion

	<p>(ii) and supporting landowners to retire land, establish forests where appropriate, and plant trees on land with high actual or potential erosion risk;</p> <p>e) Supporting and encouraging improved riparian management across all TANK catchments.</p>	
19	<p>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;</p> <p>a) Whether freshwater quality objectives or targets are being met in the catchment where the activity is to be undertaken;</p> <p>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;</p> <p>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</p> <p>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.</p>	<p>Land Use Change and nutrient losses</p>
20	<p>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;</p> <p>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;</p> <p>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;</p> <p>c) whether stock exclusion is practicable in the circumstances including in relation to;</p>	<p>Sediment Management / Stock Exclusion</p>



	<ul style="list-style-type: none"> <li>(i) total costs of stock exclusion measures compared to expected water quality benefit assessed in (a) and other possible adverse effects including stock welfare;</li> <li>(ii) technical or practical challenges of any works required for stock exclusion to be effective;</li> <li>(iii) potential costs and benefits provided by alternative measures compared to stock exclusion.</li> </ul>	
21	<p>The Council will support the establishment and operation of Industry Programmes and Catchment Collectives and;</p> <ul style="list-style-type: none"> <li>a) ensure any relevant information or expertise for making sustainable land management decisions is available to land managers</li> <li>b) support local investigation and water monitoring programmes where information gaps exist</li> <li>c) support development and use of catchment scale models that assist in identification and management of critical source areas</li> <li>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</li> <li>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.</li> </ul>	Adaptive approach to nutrient and contamination management t
22	<p>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;</p> <ul style="list-style-type: none"> <li>a) further supporting the development of Industry Programmes that contribute to meeting applicable freshwater objectives by; <ul style="list-style-type: none"> <li>(i) identifying practices that contribute to meeting applicable freshwater objectives;</li> <li>(ii) specifying timeframes for completion or adoption of measures to mitigate contaminant losses;</li> <li>(iii) ensuring individual performance under an Industry Programme is monitored;</li> <li>(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;</li> <li>(v) promoting adoption of good industry practice;</li> <li>(vi) ensuring that Industry Programmes are consistent with the requirements of Schedule 5;</li> </ul> </li> </ul>	Adaptive approach to nutrient and contamination management



	<p>b) supporting landowners to establish Catchment Collectives to develop and implement environmental management plans that contribute to meeting applicable freshwater objectives by;</p> <ul style="list-style-type: none"> <li>(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;</li> <li>(ii) specifying timeframes for completion or adoption of measures to mitigate contaminant losses;</li> <li>(iii) ensuring individual performance under a catchment collective is monitored;</li> <li>(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;</li> <li>(v) promoting adoption of good agricultural practice;</li> <li>(vi) ensuring programmes prepared by a collective is consistent with the requirements of Schedule 5;</li> </ul> <p>c) Approving any Landowner Collective or Industry Programme developed under Schedule 5;</p> <p>d) Auditing Landowner Collective or Industry Programmes prepared and approved under Schedule 5 including auditing of member properties.</p>	
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.	Adaptive approach to nutrient and contamination management
24	<p>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;</p> <ul style="list-style-type: none"> <li>a) provide a conflict resolution service;</li> <li>b) where an individual is no longer, or is deemed through conflict resolution processes not to be, a member the Council will; <ul style="list-style-type: none"> <li>(i) require the development of a farm plan for that property within 6 months or;</li> <li>(ii) require an application for a land use consent to be made; and</li> </ul> </li> <li>c) take appropriate enforcement action.</li> </ul>	Adaptive approach to nutrient and contamination management
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	Adaptive approach to nutrient and



	ensure reporting (as specified in Schedule 5) on the milestones in Table 1 below, (stock exclusion by 2023, other time frames for regulatory mitigation reference priority set out in schedule 3)	contamination management
TANK Rules (key components)		
1a) & b)	<p>The use of production land on farm properties or farming enterprises in the TANK catchments that are greater than 10 hectares (and with less than 75% plantation forest cover) pursuant to s9(2) RMA and associated non-point source discharges pursuant to Section 15 (RMA) – Permitted subject to the following:</p> <p>b), Either;</p> <p>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;</p> <p>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;</p> <p>1. the Council shall be provided with the Farm Environment Plan upon request</p> <p>2. information about the implementation of the mitigation measures identified for the property shall be supplied to the Council on request</p>	Production Land Use - Nutrient Management
1c) – f)	<p><i>Applies to same land use activities as 1a) &amp; b) – permitted subject to the following:</i></p> <p>(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.</p> <p>(d) Rivers that are crossed by formed stock races are bridged or culverted by 31 May 2023.</p> <p>(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.</p> <p>(f) Conditions (d) to (e) apply only to rivers with an active formed channel.</p>	Sediment Management / Stock Exclusion
2	<i>Applies to same land use activities as 1 – controlled where the following applies:</i>	Production Land Use -



	The activity does not meet condition (b) of Rule TANK1.	Nutrient Management
	<i>Matters of discretion: ...</i>	
3	Stock Access to rivers lakes and wetlands – <i>restricted discretionary where the following applies:</i>  The activity does not meet any one of the conditions (c)- (f) of Rule TANK1.  <i>Matters of discretion: ...</i>	Sediment Management / Stock Exclusion
4	The changing of a 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 resulting in an increase in annual N loss and associated non-point source discharges pursuant to Section 15 (RMA) - <i>Controlled</i>  a) Any change to the Production Land Use Activity commencing after the notification of this Plan Change that is 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 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)  <i>Matters of discretion: ...</i>	Land Use Change and nutrient losses
4a	The changing of a 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 resulting in an increase in annual N loss and associated non-point source discharges pursuant to Section 15 (RMA) – <i>Restricted Discretionary</i>  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 that results in the annual nitrogen loss increasing by more than the applicable amount shown in Table 2 in Schedule 4.  <i>Matters of discretion: ...</i>	Land Use Change and nutrient losses



RR	Cultivation – steep land – Permitted subject to the following:	Sediment
MP		Management /
7	g. In the TANK catchments there is no cultivation of land (ref maps/zones) over 20° except; (i) where the activity is subject to a management plan prepared as part of the NESPF requirements (ii) where it is less than 10% of the paddock area.	Stock Exclusion

Cultivation – setbacks – Permitted subject to the following:

h. In the TANK catchments, there is no cultivation of land (ref maps/zones) that results in exposure of bare soil within;

(i) 5 m of any river, modified watercourse or drain where the land is flat to gently rolling (0-7°)

(ii) 10 m of any river, modified watercourse or drain where the land is moderately rolling (>7 – 20°)

(iii) 15 m of any river, modified watercourse or drain where the land is over 20°

except

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

(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

(vi) where the cultivation is in relation to activities permitted by Rule 70.

#### Schedules

3	Priority Catchments – sets priority catchments, according to the risk of sediment loss, nitrate concentrations not being met, the levels of dissolved oxygen and whether there is a Source Protection Zone. These parameters determine whether priority is high, medium or low. Based on that ranking Farm Environment Plans, Catchment Collectives and Industry Programmes are required to be completed in 3, 6 or 9 years.	Adaptive approach to nutrient and contamination management.
4	Land Use Change - includes tables setting an allowable nitrogen load per land use type against soil type; and nitrogen loss thresholds for unirrigated and irrigated land uses against soil type.	Land Use Change and nutrient losses
5	Landowner Collective, Industry Programme and Farm Environment Plan - sets out the requirements for Catchment Collective, Industry Programme and Farm Environment Plans including environmental outcomes, information requirements, approval criteria, reporting requirements, review and auditing.	Adaptive approach to nutrient and contamination management.



8.2.5 Assessment of the Appropriateness of the Provisions

The assessment of the changes to the policies, rules and other methods under sections 32(1)(b) and (2)(a) of the Act, is provided in Table 29 below. The new and amended policies, rules and other methods to be amended via this plan change are set out under Table 27 above and assessed for their appropriateness in achieving the objectives of the Plan Change below.

In association with the following assessment, it is important to note that a significant volume of work has been undertaken by the Council in investigating the potential economic, social and cultural benefits and costs of the changes proposed by Change 9 TANK. These reports are listed in Table 28 as follows and should be referred to for further detail to the assessment provided in Table 29:

Table 28 – Reports Commissioned to Assess the Potential Economic, Social and Cultural Effects of Change 9 as relevant to the Production Land Use Activity Provisions

Report Title, Author and Date	Summary of Key Findings in Regard to the Proposed Production Land Use Activity Provisions
<i>'Part 2 of the TANK Catchment Economic, Social and Ecological Impact Assessment: Water Management &amp; Land Management Policy Options',</i> Agfirst, March 2018	<p>This Agfirst Report establishes base models for different types of pastoral country farms. The models include expected income and expenditure and cover the following farming types:</p> <p>Summer Moist – Sheep &amp; Beef Summer Dry – Sheep &amp; Beef Part time – Sheep &amp; Beef Intensive – Sheep and Beef Summer Moist – Dairying</p> <p>In addition to economic modelling the report models nutrient losses to water from the different farming types factoring in soil type and slope. It then factors in mitigation scenarios to reduce sediment levels in the TANK catchments from grazed (pastoral) land by 30%. The mitigation options included in the model were: 1. Stream bank erosion control by the provision of riparian strips along water ways; 2. Land use change, retiring high sediment loss micro and sub catchments and erosion vulnerable lands from livestock grazing; and 3. More extensive use of pole planting on erosion prone hills that are not retired from grazing.</p>

Mitigation scenarios modelled to reduce nitrogen loss to water by 10% in the TANK catchment were: 1. Change behaviour in cropping; 2. Optimal use of fertilisers; and 3. Change in land use. The models developed in the Agfirst Reporting were used by Nimmo Bell to measure the direct economic impacts of these sediment and nitrogen loss mitigation scenarios.

*'Direct Economic Impact of the TANK – A report prepared for Hawke's Bay Regional Council', Nimmo-Bell & Company Ltd, June 2018.*

Ten farm systems are modelled by Nimmo Bell (utilising the Agfirst work). These include the five pastoral farming types modelled by Agfirst and the five horticultural land uses (kiwi fruit, pip fruit, grapes, summerfruit and vegetables). Two potential TANK policy scenarios are modelled assessing the impact over time of irrigation restrictions plus sediment and nutrient mitigation.

For the horticultural scenarios a base case is modelled with no additional mitigation and compared to 'Scenario 2 Future B' which includes reductions in water available for irrigation and increased expenditure for mitigation to reduce sediments and nutrients. 'Scenario 3 Future C' includes greater reductions in water available for irrigation as well as increased expenditure for mitigation to reduce sediments and nutrients. For the pastoral scenarios mitigations are modelled with a 30% reduction in sediment loss for 'Scenario 2 MS1' and a 30% reduction in sediment plus a 10% reduction in nitrogen loss in 'Scenario 3 MS2'. Mitigations are phased in over 10 years including some land use change to forestry.

The results for horticulture showed a net revenue loss of 9% and 18% respectively for the Future B and C scenarios. Significantly for consideration of the Production Land Use provisions however, both of these scenarios had increased expenditure of 1% resulting from the sediment and nutrient reduction mitigation. The more significant contributor to revenue loss was from the reduced irrigation.

The results for pastoral farming were a 4% and 8% decrease in revenue for the MS1 and MS2 scenarios respectively from the base model. This reduces to 3% and 6% reductions in revenue when the revenue from land use changes to forestry is added in.

When Horticulture and Pastoral including Forestry cashflows are combined the present value of the net cashflow for the whole TANK of the combined reductions in irrigation water availability and sediment and nutrient run off reductions, is down 8% for Scenario 2 and down 15% for Scenario 3 when compared with the base models

The TANK Economic Assessment Working Group noted that the economic analysis does not factor in behavioural change, which is likely to reduce the assessed negative impacts as farmers adjust to the new reality. The analysis also shows that reducing water allocation by the amounts modelled, have a far larger negative impact than the costs of reducing sediment and nutrient inflows into water ways.

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The report noted that Hawke’s Bay is heavily reliant on primary production and the analysis of indirect and induced economic effects (subsequently undertaken by Market Economics) will highlight the even greater negative impacts beyond the horticultural and agricultural sectors.

*‘Economy-wide Impacts of Proposed Policy Options for the TANK Catchments’*, Market Economics Ltd, August 2018.

The Market Economics assessment draws on the modelling work in the above mentioned Agfirst and Nimmo Bell reports in developing a comprehensive assessment of the economy wide flow on impacts. The Market Economics analysis also factors in the following effects: income from carbon (net of banking to pay back carbon liabilities), changes in purchases (expenses) including labour costs, changes in revenue (sales), changes in operating surplus, and changes in margins. The analysis considers both demand-side and supply-side impacts and presents the results of the analysis in different output tables. It is important to note in reading the following summary that the Market Economics assessment is based on the full mitigation measures in the different scenarios. Where dollar figures are used, they are based on \$2016 and comparisons are made against a 2016 base model. Therefore, the findings quoted below include both irrigation water restrictions and sediment and nutrient loss reduction mitigations, with only the later being relevant to the Production Land Use provisions of Change 9.

One of the outputs is average yearly impacts experienced over the entire 30 years – For horticulture ‘Future C produces average impacts that are more than twice as large as Future B (e.g. gross output losses of \$106M compared to \$232M, or value added losses of \$61M compared to \$132M). The differences in the pastoral scenarios are lower in dollar terms but the variation between the two scenarios is significant being a \$2M loss in gross output under MS1 and a \$22M loss under MS2 (or in Value Added terms \$1M gain compared to a \$6M loss).

The report notes that a key positive outcome of the pastoral sub-scenarios is the receipt of new income from harvested timber and the flow-on benefits to the rest of the economy generated by additional jobs in wood processing. Such outcomes are not however experienced until near the end of the 30 year timeframe.

When direct, indirect and induced impacts beyond the farm systems are added in, significant impacts are calculated on a regional scale. For the combined horticultural and pastoral Scenario 2 and Scenario 3 mitigations the Hawke’s Bay regional reductions in Net Present Value of Value Added Impacts are a reduction of \$653M for Scenario 2 and \$1,426M for Scenario 3 (3.5 times the size of the direct impact).

The distribution of value added impacts among economic industry types is also considered. In Hawke’s Bay the largest values added impacts are always experienced by the agricultural industry directly impacted by the mitigation scenarios and the key processing industries reliant on the outputs. Under the Horticultural Future B scenario a loss of value added of \$184M is estimated for the horticulture and fruit growing

industry and a further loss of \$260M is estimated for food manufacturing industries. Other industries are then impacted by losses in income and household spending.

The agriculture, forestry & fishery support service industries group however benefits because of the additional demands for services associated with farm mitigations including the additional forestry plantings.

For the combined pastoral and horticultural Scenario 2 the value added impacts for the region are equivalent to a 2% loss over the primary sector and a 2.7% loss over the secondary sector. For Scenario 3 the losses are increased to 4.4% and 5.9% of the primary and secondary sectors respectively.

Effects on employment are also modelled. At an on farm / orchard level the impacts are low as the Agfirst and Nimmo Bell modelling has been based on no substantive changes in farm expenditure (including labour). The lost farm surplus however has flow on effects at a regional scale in terms of employment in processing and service industries. The model assumes that reductions in the value of output by processors will be matched by equivalent rates of employment loss. That equates to a total of 871 jobs (each job is based on employing a single full-time equivalent worker for one year) to a 1% loss in regional employment under the combined pastoral and horticultural Scenario 3 (or a loss of 363 jobs and a 0.4% loss in regional employment under Scenario 2).

*"TANK Social and Cultural Impact Assessment Report – Community Reference Group feedback on the draft TANK plan", Anthony Cole, Joella Brown and Rhonda Cole, August 2018.*

This report documents responses from a 'Community Reference Group' established with representatives from each of the four TANK catchments and 18 members in total. The Group includes 7 Māori and 11 non- Māori representatives. Group representatives are involved with the following organisations:

Birthright Hawke's Bay; Napier City Council; Colenso High School; Hukarere Māori Girls College; The Karamu Catchment Group; Mahora School Board of Trustees; Systems Analysis Solutions; Hawke's Bay Chamber of Commerce; Horticultural NZ; Forest and Bird (volunteer); Hawke's Bay District Health Board; Presbyterian Support; Hawke's Bay Māori Tourism; Te Taiwhenua o Heretaunga, and Recognised Seasonal Employer (RSE) workers.

The report records the results by quoting individual responses to each question, although there are not 18 responses for each question as respondents did not necessarily provide an answer to every question and where response were similar they have been combined.

The response results have been grouped under the following subheadings: general comments from CRG meetings and interviews; questions asked during CRG meetings and interviews; possible social effects of the TANK plan; possible cultural effects of the TANK plan; possible ecological effects of the TANK plan and possible economic effects of the TANK plan.

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It is difficult to summarise the responses for the purposes of this table however useful insights are offered to different aspects of social and cultural effects. The responses are not necessarily specific to the provisions included in proposed Change 9 but are specific to the significance of improving the health of water bodies within the TANK catchment and the social and cultural benefits of such an outcome.

Table 29 - Assessment of the proposal under sections 32(1)(b)(ii) and (iii), 32(2) (a) and (b) and 32(3) of the Act

Theme, Provisions and Summary of Provisions	Assessment Under RMA Section 32(2)		Assessment under RMA Section 32(1)(b)
	Environmental, Economic, Social and Cultural Benefits	Environmental, Economic, Social and Cultural Costs	Having regard to the appropriateness of the provisions by assessing their efficiency and effectiveness in achieving the objectives
<p>Theme: Adaptive approach to nutrient and contamination management.</p> <p>Provisions: Policies 14, 15, 16 and 17; Rules 1a) &amp; b) and 2; and Schedules 3 &amp; 5.</p> <p>Summary of Provisions:</p> <p>Policy 14 relates to Phormidium Management through various monitoring, information and non-regulatory mechanisms, but also by reducing nutrient and sediment inputs in accordance with policies 15 &amp; 16.</p>	<p>Policy 15 and rules 1a) &amp; b) &amp; 2 and schedule 5 enable flexibility and innovation in meeting environmental outcomes set out in Schedule 1 through the involvement of grower industry led groups in developing programmes to include water quality from non-point source discharges, which could include specific groups in more sensitive catchments. This allows change and innovation to come from within farming and horticultural groups in responding to Change 9 rather than being top down limit setting, particularly in the situation</p>	<p>In considering economic costs, Schedule 5 requires that to comply with Rules 1a) &amp; b), contaminant and nutrient losses are to be mitigated / reduced and that riparian margins are to be managed to achieve Policy 9. Schedule 5 references back to undertaking such mitigation to achieve the water quality outcomes in schedule 1. For the purposes of measuring economic costs however the assumption of 30% reductions in sediment loss and 10% reductions in nitrogen loss from current pastoral farms and horticultural enterprises have been assumed in the economic assessments summarised in</p>	<p>Objectives: 1, 2, 3, 12, and 15 identified in section 8.2.3 as being the most relevant to these provisions. For convenience the objectives are summarised as follows:</p> <p>Objective 1 relates to establishing the Objectives in Schedule 1; Objective 2 requires maintenance of the TANK freshwater bodies where the objectives are being met and improvement to meet the objectives by 2040 where the waterbodies are degraded; Objective 3 is for the Schedule 1 values, particularly mauri and ecosystem health to be achieved through collectively managing the attributes; Objective 12 seeks land use to be</p>

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Policy 15 seeks to achieve or maintain the freshwater targets in Schedule 1 through the use of Farm Environment Plans, Catchment Collectives and Industry Programmes to mitigate or reduce contaminant loss.

Policy 16 seeks the same by developing nutrient load limits for nutrient allocation if Policy 15 is not leading to approved attribute states and by regulating land use change where there is significant risk of nitrogen loss.

Policy 17 directs that where dissolved nutrient objectives in Schedule 1 are not being met that nutrient management plans be required in accordance with the priority order in Schedule 3.

Policies 21 – 24 establish the approach for Industry Programmes, Catchment Collectives and Farm Environment Plans.

Policy 25 requires the development of an implementation plan with stakeholders to ensure production land users are engaged in industry or landowner collective programmes or

where there is uncertain data on which to set limits.

Policy 16 provides a backstop should Policy 15 not achieve the intended outcomes and Policy 17 and Schedule 3 ensure that resources in establishing TANK Industry Programmes, Catchment Collectives; and Farm Environment Plans are first targeted at the highest priority catchments with a 3 year timeframe to be implemented.

In regard to Economic Benefits, certainty is provided to existing Production Land Use Activities that they can continue provided that land management practices are changed where required to meet TANK Industry Programmes or Catchment Collectives; or Farm Environment Plans. Greater regulation is targeted to where land use change occurs (see Rule 4 Land Use Change discussion below) to ensure activities with greater nutrient discharges cannot establish as of right and affect the attainment of the objectives in Schedule 1.

The use of permitted and controlled activity rules for Rules 1a) & b) and 2 respectively, enable land users

Table 29 above. At those levels of mitigations the Nimo Bell reporting showed an increased expenditure of 1% resulting from the sediment and nutrient reduction mitigation for the horticultural model. The more significant contributor to revenue loss was from the reduced irrigation.

The results for pastoral farming was a 6% reduction in revenue where both sediment and nutrient mitigation is applied and some change to forestry is included.

The Market Economics reports considers the full economic effects (direct, indirect and induced), however for horticulture there is no assessment of just applying the sediment and nutrient loss mitigations without the decreases in irrigation water supply (which are acknowledged in the Nimmo Bell report as the greater contributor to reduced revenue).

The Market Economics report models an annual gross output value added loss of \$6 million (\$2016) at a regional level with the pastoral Scenario MS2 sediment and nutrient loss mitigations compared to the 2016 base model. This increases to a loss of \$90M when direct, indirect and induced effects are added in (but only a

carried out in a manner that reduces contaminant loss and sedimentation in water bodies; and Objective 15 requires Council, tangata whenua and urban and rural communities working together in a way that recognises the kaitiaki and guardianship roles that the each play in freshwater management.

Collectively then these objectives require improvement in degraded waterbodies of all attributes, including by land uses reducing contaminant losses and sedimentation with recognition of kaitiaki and guardianship responsibilities.

#### Effectiveness

The proposed approach prioritises action to the most degraded water bodies (Schedule 3 and Policies 15 -17)) first, but to all water bodies requiring improvement over a 9-year period. The rules require that on farm / orchard changes will be required (assuming location in catchments were the Schedule 1 attributes are not met) to reduce contaminant loss in accordance with objective 15. The flexibility provided by the Catchment Collective and Industry Programme compliance options will enable opportunity for Objective 15 to be achieved as opposed to a direct resource user / regulator approach

have prepared farm environmental plans within the timeframes.	certainty in working their way through the required catchment collective, industry programme or farm management plan requirements without needing affected persons consents from 3 <sup>rd</sup> parties. These processes will still necessitate change towards the outcomes of Schedule 1 in improving environmental outcomes.	0.1% decrease from the 2016 base model in percentage terms).	only involving the land user and the Council. In this way the provisions are considered appropriate for achieving the objectives.
Rules 1a) and 1b) require that production activities on properties greater than 10HA in area with less than 75% forestry cover be included in a TANK Industry Programme or Catchment Collective; or Prepare and Implement a Farm Environment Plan within the requirements of Schedule 5 and timeframes of schedule 3.	The economic analysis does not factor in behavioural change, which is likely to reduce the assessed negative impacts as farmers adjust to the new reality and improve efficiencies in farming with the required mitigations in place.	The social and cultural costs of the presently degraded water bodies are highlighted in the Cole et al Social & Cultural Impact report as significant. In this regard a potential cost is that these provisions do not provide certainty that water quality objectives will be met within the timeframes considered appropriate by some groups (regardless of the 2040 timeframe referred to in objective 2).	<b>Efficiency</b>  The regulation proposed to achieve the above objectives enables several options for land owners, to make changes in accordance with catchment collective agreements or industry programmes to implement mitigation measures to reduce sediment and nutrient loss; or to make such changes individually in accordance with a specific farm management plan. This approach also enables individual primary sector industries to take ownership and drive change for water quality improvements from its members, with Council enforcement as a full back option. Such an approach can be a more efficient instigator of change than total reliance on a Council driven regulatory approach which may be met with more resistance and opposition.
Rule 2 Requires that where Rules 1a) and b) are not met that Controlled Activity Resource Consent be obtained.			
Schedule 3 sets priority catchments, according to water quality risk. Risk parameters determine whether priority is high, medium or low. Based on that ranking Farm Environment Plans, Catchment Collectives and Industry Programmes are required to be completed in 3, 6 or 9 years.	Improvements in water quality in general and in rivers and streams in particular will be of social and cultural benefit as is documented from the reference group responses in the Cole et al report (see Table 28 above).		
Schedule 5 sets out the requirements for Catchment Collective, Industry Programme and Farm Environment Plans.			<b>Appropriateness</b>  Having regard to efficiency and effectiveness the proposed 'adaptive approach to nutrient and contamination management' provisions

are therefore considered appropriate in meeting the relevant objectives.

<p>Theme: Sediment Management / Stock Exclusion.</p> <p>Provisions: Policy 18 &amp; 20; Rules 1c)-f), 3, &amp; RRMP7.</p> <p>Summary of Provisions:</p> <p>Policy 18 is to reduce adverse effects on freshwater and coastal aquatic ecosystems from eroded sediment, and from the phosphorus associated with this, by: a) regulating cultivation, stock access and vegetation clearance activities; b) – e) include various non-regulatory measures including information on measures that reduce soil loss; and recognising the benefits provided by tree planting and retirement of land for erosion control and encouraging improved riparian management.</p>	<p>Stock Exclusion</p> <p>Farm animals can have a detrimental effect on waterways by disturbing the bed, direct and indirect nutrient and faecal discharges and contributing to bank erosion. There will therefore be environmental benefits by excluding stock. The policies specify that regulation will apply to cattle, deer and pigs. Rule 1(c) sets out an exemption for low stocking rates (which have a reduction in potential effects) and on steeper country where it will be more difficult to provide reticulated water troughs and fencing costs are higher.</p> <p>In addition to this direct regulation of stock exclusion from waterways the adverse effects of runoff from stock near waterways will be reduced by change in management practices under Rules 1a) &amp; b) and the</p>	<p>Stock Exclusion</p> <p>The pastoral farm economic modelling work<sup>60</sup> factored in waterway fencing for land with a slope of less than 15° but no such fencing for steeper slopes. Fencing is based on a cost of \$14.51 per metre and water reticulation at a cost of \$5 per metre. The model also includes costs of \$200 per hectare for weed and pest control.</p> <p>As stated above however the general economic modelling concluded that such mitigation costs although potentially significant for individual pastoral farms, do not result in as significant economic costs on a region wide basis in comparison to reductions in the availability of water for irrigation would. Furthermore these costs were considered acceptable in regard to the benefits that they will achieve in improving water quality by the TANK group.</p> <p>Cultivation Restrictions</p>	<p>Objectives: 1, 2, 3, 12, and 15 identified in section 8.2.3 as being the most relevant to these provisions. Refer to the row above for a summary of these objectives.</p> <p>Collectively then these objectives require improvement in degraded waterbodies of all attributes, including by land uses reducing contaminant losses and sedimentation with recognition of kaitiaki and guardianship responsibilities.</p> <p><b>Effectiveness</b></p> <p>The targeted approach of regulating stock access to waterways and of restricting cultivation where potential adverse water quality effects would be greatest will be effective in helping to achieve objective 12 reducing contaminant loss and sedimentation in water bodies. This approach will therefore also assist in the achievement of objectives 1 – 3.</p>
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<sup>60</sup> Part 2 of the TANK catchment, economic, social and ecological impact assessment, Agfirst, March 2018 (Pages 36-38).

<p>Policy 20 is to 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 Farm Environment Plan requirements to take into account specified matters.</p> <p>Rule 1 (c)-(f)</p> <p>(c) Entry to a water body by cattle, deer and pigs is a permitted activity at a stocking rate less than 18su/ha in the paddock adjacent to the river and the slope over 60% or more of the paddock is greater than 15 degrees.</p> <p>(d) Rivers that are crossed by formed stock races are bridged or culverted by 31 May 2023.</p> <p>(e) Entry to a water body not permitted by condition (c) is a permitted activity until 31 May 2023.</p> <p>(f) Conditions (d) to (e) apply only to rivers with an active formed channel.</p>	<p>requirements of schedule 5 (section 3 Environmental Outcomes) which encourage the planting of riparian areas.</p> <p><u>Cultivation Restrictions</u></p> <p>The proposed rules would require resource consent for cultivation of slopes over 20°, with an exception provided for activities regulated by the NES for Production Forestry. The rules also target cultivation of land near to a watercourse with different separation distances applying depending on slope. These rules will help to achieve policy 18 by reducing the risk of sediment and associated phosphorous entering water ways as a result of cultivation and runoff.</p> <p>Environmental benefits will be achieved by these rules being complied with in conjunction with a change in management practices by complying with Rule 1a) &amp; b). The requirements of schedule 5 (section 3 Environmental Outcomes) include of relevance to cultivation: managing</p>	<p>Rather than modelling any additional costs the Agfirst report states<sup>67</sup>; "<i>Leaving swales uncultivated, grazing crops from the top down and cropping setbacks from streams are considered best management practice and any costs associated with this is already accounted for in the base models.</i>" In this regard, the economic modelling referred to in the row above is also relevant to this sediment management theme.</p> <p><u>Social and Cultural Costs</u></p> <p>The converse applies to the social and cultural benefits referred to in the previous column. That is, the Social and Cultural Impact report highlights the costs of degraded waterways as having greater impacts on groups with higher social deprivation or cultural values associated with access to clean natural freshwater bodies. Accordingly, there is a social and cultural cost associated with delays in improving the already degraded water bodies (those that do not meet the attributes in Schedule 1).</p>	<p>The ability to achieving objective 15 in regard to sediment management and stock exclusion will be assisted by Rules 1a) &amp; b) and the requirements of schedule 5 (section 3 Environmental Outcomes) which enable community and collective input into improving management practices and providing for mitigation.</p> <p><b>Efficiency</b></p> <p>Agreement of the approach through the TANK collaborative process is a strong indication that the provisions are considered efficient in regard to the ratio of improved water quality benefits to the economic costs of implementation.</p> <p><b>Appropriateness</b></p> <p>Having regard to efficiency and effectiveness the proposed direct regulation in rules restricting stock access to waterways and restricting cultivation where there is a risk of sediment runoff entering waterways, are therefore considered appropriate in meeting the above mentioned objectives.</p>
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<sup>67</sup> Ibid (Page 36).

Rule 3 makes stock access not complying with Rule 1(c)-(f) a restricted discretionary activity.

Rule RRMP 7

g. No cultivation of land over 20<sup>o</sup> except; (i) where the activity is subject to a NESPF management plan (ii) where it is less than 10% of the paddock area.

h. No cultivation of land that results in exposure of bare soil within;  
(i) 5 m of any watercourse where the land is flat to gently rolling (0-7<sup>o</sup>)  
(ii) 10 m of any watercourse where the land is moderately rolling (>7 – 20<sup>o</sup>)  
(iii) 15 m of any watercourse where the land is over 20<sup>o</sup> except  
(iv) except where the activity is subject to a NESPF management plan  
(v) where part of improvements to riparian management as specified in the relevant Farm Environment or Catchment Collective Plan  
(vi) where the cultivation is in relation to activities permitted by Rule 70.

sediment loss by good practice when carrying out land disturbance activities; and managing riparian margins in order to order to avoid, remedy or mitigate loss of top soil by wind or water erosion, movement of soils into waterways, damage to spoil structure and mass movements of soil.

Social and Cultural Benefits

The Social and Cultural Impact report indicates that there would be strong positive and social benefits from any regulation that results in improved water quality from stock exclusion. Particularly in regard to swimmable waterways and where there is potential for food gathering. A number of anecdotes recorded from reference group members referred to the importance of having safe places for children to swim and to gather food from.

<p>Theme: Land Use Change &amp; Nutrient Losses.</p> <p>Provisions: Policy 19; Rules 4, &amp; 4A; Schedule 4</p> <p>Summary of Provisions:</p> <p>Policy 19 is to remedy or mitigate the potential impact of diffuse discharge of nitrogen on freshwater quality objectives by regulating land and water use changes likely to result in increased nitrogen loss</p> <p>Rule 4: The changing of a use of production land where greater than 10HA resulting in an increase in annual N loss and associated non-point source discharges – <i>Controlled Activity</i> where the production land is subject to a Catchment Collective Programme meeting the requirements of Schedule 5B.</p> <p>Rule 4A: requires – <i>Restricted Discretionary</i> resource consent where the conditions of rule TANK 4 are not</p>	<p>TANK Change 9 has adopted a regulatory approach focused on changes in land use that result in increase potential for nitrogen loss via Policy 19 and Rules 4 and 4A. This will help ensure that any future land use changes do not increase nitrogen discharges into waterways from the use of production land. Reducing current levels of nitrogen where the Schedule 1 objectives are not met, is to be achieved by TANK Rules 1 and 2 in association with Schedule 5 (which includes a section on Nutrient Management and associated mitigation (section 6)).</p> <p>The environmental benefit of the approach described above is that improvements can be made with reduced nitrogen discharges through the adaptive management approach of TANK Rules 1 &amp; 2, while a direct measurable regulatory approach can be applied to ensure that future</p>	<p>The Agfirst report modelled the costs of improving nitrogen loss with the result being a decrease in EBIT of \$14,538 (2016) or a decrease of 15% from the base noting that this resulted in a loss before taxation for the summer dry model.<sup>70</sup> That report also noted that one size does not fit all due to differences in soils and topography and that some farms may struggle to obtain a 10% reduction without a corresponding reduction in stock numbers and therefore loss of income.</p> <p>Once again the same comments in relation to social and cultural costs apply as for the row above, as to delays in improving water quality by reducing nitrogen losses.</p>	<p>Objectives: 1, 2, 3, 12, and 15 identified in section 8.2.3 as being the most relevant to these provisions. Refer to the first row above for a summary of these objectives.</p> <p>Collectively then these objectives require improvement in degraded waterbodies of all attributes, including by land uses reducing contaminant losses and sedimentation with recognition of kaitiaki and guardianship responsibilities.</p> <p><b>Effectiveness</b></p> <p>The proposed approach depends on the adaptive management approach of Rules 1 and 2 to achieve reduced nitrogen loss from existing production land uses but applies direct regulation to land use change to ensure that such change will not result in reductions in water quality from increased nitrogen loss. This approach achieves objective 12 by reducing sediment loss into waterbodies. This in turn will help achieve objectives 1 – 3. Objective 15 is less relevant to the direct regulatory approach of these provisions. The resource consent process will however allow objective 15(b) to be</p>
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<sup>70</sup> Ibid (Page 67).

met or that results in the annual nitrogen loss increasing by more than the applicable amount shown in Table 2 in Schedule 4.

Schedule 4 includes tables setting an allowable nitrogen load per land use type against soil type; and nitrogen loss thresholds for unirrigated and irrigated land uses against soil type.

changes in land use do not result in greater nitrogen losses to waterways.

This accords with the findings of the Agfirst modelling report<sup>68</sup>: *"In general, it was recognised that a significant contributor to nitrogen losses was in the cropping programmes with rates of over 10 times that of pasture land....Moving to a greater use of direct drilling, better land soil type understanding and corresponding crop selection would reduce the rate of N losses. Whilst the area of cropped land is relatively low, some significant gains can be made by a universal better management of cropped land."* This report also comments on the use of fertilisers on production land: *"In reviewing the base models in many situations there were nutrient budget surpluses, by reducing these surpluses and modifying application timing further reductions in N losses could be achieved."*

achieved by setting conditions to ensure that any new land use will utilise good land and water management practices including mitigation measures and restoration measures.

**Efficiency**

Only applying the direct regulatory approach to where land use change occurs to an activity with a greater potential for nitrogen loss, while applying a more flexible adaptive management approach to existing land production activities is considered efficient. The direct regulation applied to such land use change is justifiable in benefits over costs as necessary to ensure no increases in nitrogen losses to waterways. Schedule 4 ensures that an effects base approach is applied according to nitrogen loss by land use and soil type.

**Appropriateness**

Having regard to efficiency and effectiveness the proposed approach to 'land use change and nutrient loss' provisions are therefore

<sup>68</sup> Ibid (Page 58).

The Agfirst report modelled mitigations for nitrogen loss and states<sup>69</sup>: *“By optimising fertiliser usage, and selection of crops that continue to uptake nitrogen in the winter along with practices to reduce sediment output(including land use change a 13% reduction in nitrogen losses to water was modelled.”*

The same comments in relation to social and cultural benefits apply as for the row above, as reductions in nitrogen loss will benefit the quality of waterways by reducing macrophytes and algae growth.

considered appropriate in meeting the above mentioned objectives.

<sup>69</sup> Ibid (Page 67).

### 8.2.6 Risk of Acting or Not Acting

An RMA section 32 evaluation report must contain an assessment of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions (under section 32(2)(c) the RMA). The reason for adopting the 'adaptive management approach' to nutrient loss and sedimentation from production land is due to the uncertainty of the relationship between sediment and nutrient loss in each of the four catchments and water quality in those catchments and the estuaries.

Not acting at all is not an option due to the need for Change 9 to give effect to the higher order resource management instruments including the Regional Policy Statement (Change 5) and the NPSFM.

As such there is little risk of acting in the manner proposed which will ensure improvements in the water quality of the TANK catchments over time from a reduction in sediment and nutrient losses from land use activities.

### 8.2.7 Conclusion

This above assessment demonstrates that the proposed provisions, relating to the integrated management of production land use activities, are the most appropriate for achieving the objectives of Change 9.



### 8.3 RIPARIAN MANAGEMENT PROVISIONS

#### 8.3.1 Introduction

The provisions assessed in this category include the Change 9 amendments to RRMP Rule 7 (regarding indigenous vegetation clearance) and 71 (enabling riparian planting in the Karamu Catchment). It also includes associated 'Riparian Management' policies 9 – 11 and aspects of the surface water quality 'priority management approach' policies 1 - 4.

The existing RRMP Rule 7 permits vegetation clearance subject to five performance standards being met. In summary these standards require:

- The prevention of vegetation debris or disturbed soil entering any water body.
- No significant change in colour or clarity of adjacent water bodies after reasonable mixing.
- No vegetation clearance within 5m of any permanently flowing river, lake or wetland (but this does not apply to the areas identified in the Schedule titled 'Rule 7: Areas Excluded from Conditions (c)<sup>71</sup>).
- Deposition of soil particles across a property boundary shall not exceed 10kg/m<sup>2</sup>.
- Where there is risk of soil loss, revegetation as soon as practicable.

Change 9 would add an additional performance standard preventing the clearance of indigenous vegetation within 10m of any rivers in the TANK catchments (with several specified exemptions applying).

Rule 71 of the existing RRMP makes activities affecting river control and drainage schemes, including planting trees on or within 6m of the bed of any river or lake a discretionary activity. Change 9 seeks to amend this rule by exempting riparian vegetation established to provide shade in the Karamu catchments.

These proposed rule amendments and non-regulatory mechanisms for promoting riparian planting of native species are supported by policies 9 – 11.

#### 8.3.2 Statutory Context

##### 8.3.2.1 Resource Management Act 1991 (RMA)

The Riparian Vegetation provisions of Change 9 seek to both protect indigenous vegetation in the riparian margins of the TANK catchments and to encourage the planting

<sup>71</sup> The excluded areas include significant areas of the TANK catchments that are flatter in topography.



of such vegetation to both protect water quality and enhance other values including biodiversity and cultural values.

Such an approach is consistent with enabling the community to provide for their social and cultural well-being while supporting the environmental protection clauses of RMA section 5(2)(a)-(c).

This proposed approach to riparian vegetation in Change 9 also recognises and provides for the matters of national importance listed in sections: 6(a) *the preservation of the natural character of ... wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;* and 6(e) *the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*

These provisions also have regard to sections 7 (a) kaitiakitanga; (c) the maintenance and enhancement of amenity values; (d) intrinsic values of ecosystems; (f) maintenance and enhancement of the quality of the environment; and (h) the protection of habitat of trout and salmon.

The Council has a number of functions under section 30(1) of the RMA that are relevant to the protection and enhancement of riparian vegetation. They include:

- Establishing, implementing and reviewing objectives, policies and methods to achieve integrated management of the natural and physical resources of the region (section 30(1)(a)).
- Preparing objectives and policies in relation to any actual or potential effects of the use, development or protection of land which are of regional significance (section 30(1)(b)).
- The control of the use of land for the purpose of (section 30(1)(c)):
  - soil conservation (i);
  - the maintenance and enhancement of the quality of water in water bodies (ii), and
  - the maintenance and enhancement of ecosystems in water bodies (iii);
- The control of discharges of contaminants into or onto land or water, and discharges of water into water (section 30(1)(f)).
- the establishment, implementation, and review of objectives, policies, and methods for maintaining indigenous biological diversity (section 30(1)(ga))

#### 8.3.2.2 National Policy Statement for Freshwater Management 2014 (NPSFM)

The NPSFM (as summarised in section 3.4.1 of this report above) requires values and attributes to be assigned to Freshwater Management Units (FMUs) by engagement with the community including tangata whenua. The NPSFM includes two compulsory values,



('ecosystem health' and 'human health for recreation') and a list of optional 'other national values' that may be assigned to FMUs, including:

- *Natural form and character;*
- *Mahinga kai*

These values can both be enhanced by appropriate riparian vegetation.

Objective A1 of the NPSFM reflects the above-mentioned compulsory values in requiring the safeguarding of the life supporting capacity of freshwater and the health and safety of communities as affected by contact with fresh water, in sustainably managing the use of land and discharge of contaminants.

Objective A2 of the NPSFM requires the overall quality of fresh water within catchments to be maintained or improved. In many locations within the TANK catchments water quality is below the objective levels set in Schedule 1 of Change 9.

The proposed riparian vegetation provisions will assist in achieving these NPSFM objectives.

#### 8.3.2.3 Regional Policy Statement (RPS)

Objective LW1 requires that "*Freshwater and the effects of land use and development are managed in an integrated and sustainable manner...*" The subclauses of Objective LW1 include the following matters that are directly relevant to the proposed TANK riparian provisions:

- *4. Safeguarding the life supporting capacity and ecosystem processes of freshwater, including indigenous species and their associated freshwater ecosystems*
- *14. Promoting the preservation of the natural character of...rivers, lakes and wetlands, and their protection from inappropriate subdivision, use and development.*

Objective LW3 'Tangata whenua values in management of land use and freshwater' requires that:

*Tangata whenua values are integrated into the management of freshwater and land use and development including:*

- a) recognising the mana of hapu, whanau and iwi when establishing freshwater values; and*
- b) recognising the cumulative effects of land use on the coastal environment as recognised through the Ki uta ki Tai ('mountains to the sea') philosophy; and*



*c) recognising and providing for wairuatanga and the mauri of fresh water bodies in accordance with the values and principles expressed in Chapter 1.6, Schedule 1 and the objectives and policies in Chapter 3.14 of this Plan; and*

*d) recognising in particular the significance of indigenous aquatic flora and fauna to tangata whenua.*

Retention and enhancement of indigenous riparian vegetation in accordance with the proposed Change 9 provisions will assist in achieving Objective LW3.

Policy LW1 seeks to implement those objectives through 'catchment based integrated management'. Of specific relevance to the riparian provisions, clause (1) of this policy requires that adoption of an approach for each catchment area that:

- *1.b) provides for mātauranga a hapū and local tikanga values and uses of the catchment;*
- *1.c) provides for the inter-connected nature of natural resources within the catchment area, including the coastal environment;*
- *1.e) promotes collaboration and information sharing between relevant management agencies, iwi, landowners and other stakeholders;*
- *1.gA involves working collaboratively with the catchment communities and their nominated representatives; and*
- *1.h) ensures the timely use and adaptation of statutory and non-statutory measures to respond to any significant changes in resource use activities or the state of the environment;*

Clause 3 of Policy LW1 states that when setting objectives ensure:

- a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water are safeguarded; and*
- b) adverse effects on water quantity and water quality that diminish mauri are avoided, remedied or mitigated; and...*

The riparian management provisions in Change 9 will help achieve RPS policy LW1(3).

Policy LW2 includes:

*...1. Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3: a) Greater Heretaunga / Ahuriri Catchment Area;...*

*3. When managing the freshwater bodies...: a) recognise and provide for the primary values and uses identified in Table 1;...*

The primary values for the TANK catchments, which in Table 1 are referred to as the Greater Heretaunga / Ahuriri Catchment Area, include values that are associated with or would be enhanced by the retention and enhancement of riparian vegetation, being:

- *Any regionally significant native water bird populations and their habitats*



- *Cultural values and uses for: mahinga kai, nahoanga, taonga raranga and taonga rongoa*
- *Native fish habitat in the Ngaruroro River and Tutaekuri River catchments*
- *Recreational trout angling and trout habitat in:*
  - *o the Mangaone River; o the Mangatutu Stream;*
  - *o the Ngaruroro River and tributaries upstream of Whanawhana cableway;*
  - *o the Ngaruroro River mainstem between the Whanawhana cableway and confluence with the Maraekakaho River; and*
  - *o the Tutaekuri River mainstem above the Mangaone River confluence*
- *The high natural character values of the Ngaruroro River and its margins upstream of Whanawhana cableway, including Taruarau River*
- *The high natural character values of the Tutaekuri River and its margins above the confluence of, and including, the Mangatutu Stream*
- *Trout spawning habitat*

Relevant secondary values, include:

- *Amenity for contact recreation (including swimming) in lower Ngaruroro River, Tutaekuri River and Ahuriri Estuary*
- *Any locally significant native water bird populations and their habitats*
- *Native fish habitat, notwithstanding native fish habitat as a primary value and use in the Tutaekuri River and Ngaruroro River catchments*
- *Recreational trout angling, where not identified as a primary value and use*
- *Trout habitat, where not identified as a primary value and use*

The following amendments resulting from Change 5 to other RRMP objectives and policies are also relevant to the riparian vegetation provisions of Change 9:

*POL 4A To use both non-regulatory and regulatory methods for protecting significant values of wetlands.*

*POL 4 To use non-regulatory methods, as set out in Chapter 4, as the primary means for achieving the preservation and enhancement of remaining areas of significant indigenous vegetation and ecologically significant wetlands, in particular:*  
...

*OBJ 27A Riparian vegetation on the margins of rivers, lakes and wetlands is maintained or enhanced in order to:*

- a) maintain biological diversity;*
- b) maintain and enhance water quality and aquatic ecosystems; and*
- c) support the use of surface water resources in accordance with tikanga Māori.*

These objectives and policies provide direction to primarily use non-regulatory methods for the enhancement of riparian vegetation (POL 4), but Obj 27A also provides the scope



to use regulation if required to maintain and enhance riparian vegetation in improving surface water quality.

### 8.3.3 Relevant Objectives of Change 9

Given the statutory context provided above, it is those objectives relating to: water quality protection including providing for the values of mauri and ecosystem health and by mitigating sediment loss; natural character; kaitiakitanga; and the improvement of indigenous biodiversity that are particularly relevant to the Riparian Management provisions. Therefore, the evaluation of the appropriateness of the provisions should be against the following relevant Change 9 objectives: 1, 3, 6, 7, 8, 11, 12, and 15 (see section 7.2 above). Objective 11 is the most specific objective to Riparian Management and for convenience is quoted as follows:

*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.*

### 8.3.4 Overview of Practicable Options

The status quo regulation applying to riparian margins is set out under section 8.3.1 above. Although existing Rule RRMP 7(c) protects riparian vegetation within 5m of the watercourse, the associated Schedule exempts this rule from applying to significant areas of the TANK catchments. Further to this it is noted that existing provision applies to riparian vegetation in general, so would therefore require resource consent for the removal of any exotic vegetation intended to be replaced with indigenous vegetation.

There is therefore little effective existing regulation protecting riparian vegetation and / or indigenous riparian vegetation within the TANK catchments.

A scientific workshop was held at the HBRC on 'Ecosystem Health in Disturbed Lowland Catchments' in February 2016, with the Karamu catchment used to frame the discussion. The outcome of the workshop was an information paper being prepared under the same title by NIWA. That paper documents a variety of options for reducing macrophyte growth



and increasing dissolved oxygen levels in lowland catchments to improve overall ecosystem health and water quality.

The options that have been considered in the NIWA paper are set out in Table 30 below, with their pros and cons recorded.

**Table 30– Options for Reducing Macrophyte Growth and Increasing Dissolved Oxygen Levels**

Option	Pros	Cons
1. Riparian Fencing and Planting.	<p>Fencing and planting the banks of small to mid-sized streams would be expected to shade the stream channel and reduce water temperatures. In turn this is expected to reduce the abundance of nuisance aquatic macrophytes and attached periphyton. Shading and cooling also increase dissolved oxygen levels as cooler water contains more oxygen.</p> <p>Increased dissolved oxygen levels in stream could potentially reduce phosphorus release from bed sediments which typically occurs under anoxic conditions.</p> <p>Beneficial effects will be more pronounced where higher levels of shading are achieved over longer lengths of stream. At least 50% shading is recommended to achieve a reduction in the abundance of emergent and sprawling plants and periphyton.</p> <p>Additional benefits from riparian planting would include: increased inputs of leaves and wood enhancing instream habitat and heterotrophic nutrient processing; trapping sediments and associated nutrients from overland run off; and</p>	<p>Planting and fencing can restrict access to the stream channel for channel clearance and flood control activities.</p> <p>In early years of establishment fenced riparian areas can be a haven for terrestrial weeds.</p> <p>The establishment costs including fencing and weed control can be relatively high.</p> <p>There is uncertainty about the impact of reduced instream plant abundance on stream nutrient concentrations during the growing season (that is, plant uptake of nutrients directly from the water). Reduced nutrient uptake by plants could be offset by increased nutrient retention in the planted riparian zone and reduced release of phosphorus from bed sediments.</p>



	reduced run off water entering water ways.	
2. Herbicide Use – Aquatic herbicide applied during the growing season to reduce or halt instream macrophyte growth.	Diquat and endothall are two herbicides registered for aquatic use in New Zealand. These are contact herbicides that desiccate the plant material that they contact. They are considered non-toxic to aquatic biota and people if applied correctly at labelled recommended rates	<p>Public concerns about the toxicity of herbicides.</p> <p>Concern about deoxygenation of waterways after application from the decay of plant material. Decay rates can be reduced by application in spring and autumn when temperatures are cooler and decay rates are likely to be less.</p> <p>Efficacy to control below – surface plants is often reduced in turbid water or where plant surfaces are covered by epiphytes or deposited sediment.</p>
3. Grass Carp are a potential tool to reduce macrophyte abundance.	With carefully managed stocking rates grass carp might potentially be able to confine macrophyte growth at intermediate levels.	<p>Difficulty of containment in rivers where flooding could spread species to other streams and rivers. Requires approvals from MPI and DOC.</p> <p>Complete removal of vegetation (including desirable vegetation) is possible at higher stocking rates.</p> <p>Sensitive to low dissolved oxygen, high water temperatures and polluted water so would find conditions challenging in lowland streams.</p>
4. Mechanical Removal.	<p>Removal by a digger can reduce macrophyte abundance in lowland streams for up to 6 months.</p> <p>Alternatively, weeds can be removed with cutting which has less immediate disruptive effects on the aquatic environment than digging.</p>	<p>Removal by digger can be more damaging to ecosystem health.</p> <p>Biota such as eels and invertebrates can be trapped in weeds dug out.</p> <p>Excavation involves disturbance of bottom sediments, nutrient mobilization and increased water turbidity.</p>



Cutting of macrophytes needs a higher frequency than removal by digger as the plants will grow back when their roots remain in sediment.

Cut plants accumulate in the depositional zones and break down quickly increasing the risk of local problems with dissolved oxygen.

5. Nutrient Reduction from Productive Land Use Activities	International studies suggest that it may be possible to reduce stream macrophyte abundance via nutrient reduction.	Local studies do not provide any evidence that macrophyte control in the Karamu catchment could be achieved with nutrient limitation.
	Reducing nitrate concentrations in water can help to reduce concentrations of algae.	Very low concentrations would be required as macrophytes that root into the bed of the stream can require nutrients from bed sediments.

The NIWA report concluded that riparian fencing and planting is the management option that is considered most likely to achieve long-term improvements in the ecosystem health within the Karamū / Clive catchments. Lower impact activities like herbicide use and macrophyte cutting and removal by rake could be used as interim measures to reduce instream plant abundance while riparian plantings establish.

Of those methods listed in Table 30, it is only riparian fencing and planting and nutrient reduction from productive land use activities that provide options in terms of the integrated management of effects of land and water use via regulation and non-regulatory methods. The other methods would all require non-regulatory instream works by the HBRC.

Beyond the lowland Karamu and Clive catchments the benefits of riparian planting in reducing water temperature will diminish where there are wider stream beds, however other benefits including the trapping of sediments, reduced runoff flows and enhanced natural character and biodiversity will remain.

Non-regulatory options for riparian and planting can include community planting initiatives and then subsequent weed control programmes.

Table 31 sets out how these approaches for managing Riparian Margins have been implemented as regional plan provisions in the form of policies and rules within Change 9.

**Table 31 – Riparian Margin Management Provisions Included in Change 9**



Ref	Provision / Provision Summary
Policy 1.	<p>The Council with landowners, local authorities, industry and community groups, mana whenua and other stakeholders will regulate or 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 targets shown in Schedule 1 by prioritising;</p> <ul style="list-style-type: none"> <li>a) water quality improvement in sub-catchments ...;</li> <li>b) sediment management ...</li> <li>c) the significant environmental stressors of excessive sedimentation and macrophyte growth in lowland rivers and nutrient loads entering the Ahuriri and Waitangi estuaries;</li> <li>d) the management of riparian margins; ...</li> </ul>
Policy 2.	<p>In the Clive/Karamu Rivers and their tributaries, in addition to Policy 1 the Council will;</p> <ul style="list-style-type: none"> <li>a) reduce water temperature and increase the level of dissolved oxygen by <ul style="list-style-type: none"> <li>(i) the establishment of riparian vegetation to shade the water and reduce macrophyte growth while accounting for flooding and drainage objectives</li> <li>(ii) reducing excessive macrophyte growth by physical removal of aquatic plants in the short term</li> </ul> </li> <li>b) adopt flow management regimes to remedy or mitigate the effects of surface and ground water abstraction</li> <li>c) reduce the amount of sediment and nutrients entering the freshwater from adjacent land</li> <li>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).</li> </ul>
Policy 3.	<p>In lakes and wetlands in the TANK Catchments, in addition to Policy 1 the Council will;</p> <ul style="list-style-type: none"> <li>a) work at a catchment scale with land owners on the wetland or lake catchment (refer Policies 21 ad 22) to; <ul style="list-style-type: none"> <li>(i) reduce sediment and nutrient inputs into the waterbody</li> <li>(ii) improve water quality by increasing macrophyte plant growth in shallow lakes</li> <li>(iii) improve ecosystem health and water quality by excluding stock and improving riparian management</li> <li>(iv) meet water quality objectives in Schedule 1 for water bodies downstream of the lake or wetland</li> <li>(v) support and assist landowners to protect, increase or restore existing wetlands or create new wetlands including for the management of urban stormwater.</li> </ul> </li> </ul>
Policy 4.	<p>In the lower Ngaruroro and Tūtaekuri Rivers and their tributaries, in addition to Policy 1 the Council will;</p> <ul style="list-style-type: none"> <li>a) improve water clarity and reduce deposited sediment by reducing the amount of sediment being lost from land;</li> <li>b) reduce risk of proliferation of algae by reducing nutrient losses from land, including by reducing phosphorous loss associated with sediment;</li> <li>c) improve ecosystem health and water quality by excluding stock from surface water bodies and improving riparian management</li> </ul>



Policy 9.	<p>The Council will promote and support the establishment of riparian vegetation, including in conjunction with stock exclusion and setback regulations that;</p> <ul style="list-style-type: none"> <li>a) contributes to the health of aquatic ecosystems especially for indigenous species;</li> <li>b) provides shading to reduce macrophyte growth and water temperature especially in lowland tributaries of the Karamu River;</li> <li>c) reduces contamination of water from land use activities;</li> <li>d) reduces river bank erosion;</li> <li>e) improves local amenity;</li> <li>f) enhances recreational activities;</li> <li>g) improves fish spawning habitat;</li> <li>h) assist in weed control.</li> </ul>
Policy 10.	<p>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.</p>
Policy 11.	<p>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;</p> <ul style="list-style-type: none"> <li>a) Working with industry groups and land owner collectives to identify where riparian management is to be improved;</li> <li>b) Providing information about appropriate riparian planting that assists in meeting the values;</li> <li>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;</li> <li>d) Providing funding assistance for riparian vegetation improvements; and</li> <li>e) When making decisions on applications for resource consent to; <ul style="list-style-type: none"> <li>(i) take into account benefits arising to the values in Policy 9 as a result of the activity;</li> <li>(ii) consider whether to waive the fees and charges required to process the application where; <ol style="list-style-type: none"> <li>1. there is significant public benefit from the activity or the nature and scale of the activity results in significant ecosystem benefits; and</li> <li>2. the activity is not a requirement of any other resource consent.</li> </ol> </li> </ul> </li> </ul>
Rule RRMP 7	<p><i>Indigenous Vegetation Clearance – Permitted Activity provided the following conditions are complied with:</i></p> <ul style="list-style-type: none"> <li>f). In the TANK catchments there is no clearance of indigenous vegetation within 10m of any rivers except: <ul style="list-style-type: none"> <li>(i) where the activity is subject to the preparation of a management plan prepared as part of the NESPF requirements</li> </ul> </li> </ul>



- (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 of network services.

Rule RRMP 71	<p><i>Makes activities affecting river control and drainage schemes a discretionary activity – including: “The introduction or planting of any plant including any tree in, on, or under the bed of any river, lake or artificial water course, or within 6 metres of the bed.” The following exemption is proposed to be added to the end of this bullet point:</i></p> <p><i>“Except for riparian vegetation established to provide shade in the Karamu catchments”</i></p>
Schedule 5	<p>Landowner Collective, Industry Programme and Farm Environment Plan - sets out the requirements for Catchment Collective, Industry Programme and Farm Environment Plans including environmental outcomes which include:</p> <p>2c) Management of 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:</p> <ul style="list-style-type: none"> <li>(i) Loss of topsoil by wind or water erosion</li> <li>(ii) Movement of soils and contaminants into waterways</li> <li>(iii) Damage to soil structure and health</li> <li>(iv) Mass movements of soil</li> </ul> <p>...</p> <p>2h) In the Karamu and Lake Poukawa Catchments; 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.</p>



8.3.1 Assessment of the Appropriateness of the Provisions

The assessment of the changes to the policies, rules and other methods under sections 32(1)(b) and (2)(a) of the Act, is provided in Table 32 below. The new policies, amended RRMP rules and other methods (Schedule 5 ) included in this plan change are set out under Table 31 above and assessed for their appropriateness in achieving the objectives of the Plan Change below.

The reports listed in Table 28 above regarding the potential economic, social and cultural effects of Change 9 are referred to in the assessment provided in Table 32:

Table 32 - Assessment of the Riparian Management Provisions under sections 32(1)(b)(ii) and (iii), 32(2) (a) and (b) and 32(3) of the Act

Theme, Provisions and Summary of Provisions	Assessment Under RMA Section 32(2)		Assessment under RMA Section 32(1)(b)
	Environmental, Economic, Social and Cultural Benefits	Environmental, Economic, Social and Cultural Costs	Having regard to the appropriateness of the provisions by assessing their efficiency and effectiveness in achieving the objectives
<p>Theme: regulation proposed for riparian management.</p> <p>Provisions: Policies 1 – 4 and 9 - 11; Rules RRMP 7 &amp; 71; and Schedule 5.</p> <p>Summary of Provisions:</p> <p>The policies as set out in Table 31 above establish both regulatory and non-regulatory approaches to riparian</p>	<p>The direct instream water quality benefits of retained or increased riparian vegetation are explained in Table 30 above and will be most pronounced for lowland streams where shading can reduce water temperature, increase dissolved oxygen levels and reduce macrophyte and algae growth.</p>	<p>In considering economic costs, Schedule 5 requires that riparian margins are to be managed to achieve Policy 9. Schedule 5 references back to undertaking such mitigation to achieve the water quality outcomes in schedule 1. As set out in the Production Land Use assessment above, the Nimo Bell reporting showed an increased expenditure of 1% resulting from the sediment and nutrient reduction</p>	<p>Objectives: 1, 3, 6, 7, 8, 11, 12, and 15 identified in section 8.2.3 as being the most relevant to these provisions. For convenience the objectives are summarised as follows:</p> <p>Objective 1 relates to establishing the Objectives in Schedule 1; Objective 3 is for the Schedule 1 values, particularly mauri and ecosystem health to be achieved through collectively managing the attributes;</p>

management. Of the priority management approach water quality policies (1 – 4), Policy 2 applying to the Clive/Karamū Rivers and their tributaries places an emphasis on riparian vegetation in reducing water temperature and increasing the level of dissolved oxygen through shading and a subsequent reduction in macrophyte growth.

Policies 9 – 11 as set out in Table 31 above are specifically focussed on the environmental benefits of riparian management.

RRMP Rule 7 would require resource consent for the removal of any indigenous vegetation within 10m of any rivers. While the addition to RRMP Rule 71 ensures that riparian planting within 6m of the bed of streams in the Karamū catchment can be undertaken as a permitted activity despite the catchment being subject to a river control and drainage scheme.

Other environmental benefits are more universal to surface water bodies in general and these include: increased inputs of leaves and wood enhancing instream habitat and heterotrophic nutrient processing; trapping sediments and associated nutrients, including phosphorous, from overland run off; and reducing run off water volumes entering waterways. In addition to these direct benefits to water quality, indigenous riparian vegetation can improve biodiversity, ecosystem habitat and natural character values.

The retention or planting of indigenous vegetation provides cultural benefit in enhancing the mauri of the river.

The Cole et al Social and Cultural impact assessment included comments from the reference group that affirm the social and cultural benefits of indigenous riparian vegetation, including: *"Planting of this kind contributes many different social, cultural and ecological values into*

mitigation for the horticultural model. The more significant contributor to revenue loss was from the reduced irrigation.

The results for pastoral farming was a 6% reduction in revenue where both sediment and nutrient mitigation is applied and some change to forestry is included.

The pastoral farm economic modelling work<sup>76</sup> factored in waterway fencing. Fencing is based on a cost of \$14.51 per metre, riparian planting at a cost of \$2.48 per m<sup>2</sup> and water reticulation at a cost of \$5 per metre. The model also includes costs of \$200 per hectare for weed and pest control.

As stated above however the general economic modelling concluded that such mitigation costs although potentially significant for individual pastoral farms, do not result in as significant economic costs on a region wide basis in comparison to reductions in the availability of water for irrigation would. Furthermore, these costs

Objectives 6 & 7 relate to improving and maintaining mauri, water quality and water quantity in the Ngaruroro and Tūtaekuri river catchments respectively, with both objectives seeking to protection of natural character. Objective 8 relates to improving mauri, water quality and water quantity in the Karamū and Clive River catchment; Objective 11 seeks to improve aquatic ecosystem health and mauri by appropriate management of riparian margins as set out in 8.2.3. Objective 12 seeks land use to be carried out in a manner that reduces contaminant loss and sedimentation in water bodies; and Objective 15 requires Council, tangata whenua and urban and rural communities working together in a way that recognises the kaitiaki and guardianship roles that the each play in freshwater management.

Collectively then these objectives require improvement in degraded waterbodies including by land uses reducing contaminant losses and sedimentation and by riparian management. In doing so recognition of

<sup>76</sup> Part 2 of the TANK catchment, economic, social and ecological impact assessment, Agfirst, March 2018 (Pages 36-38).

The references to riparian management in Schedule 5 and to the Karamū and Lake Poukawa Catchments in particular will ensure that riparian planting will be required as appropriate as part of a TANK Industry Programme or Catchment Collective; or Farm Environment Plan under the TANK Production Land Use rules.

*communities”<sup>72</sup>; “It is important to be able to continue to give expression to mahinga kai and you can’t do that if there is no biodiversity...Riparian planting ... is an important step. We have been to Raglan harbour. The whanau and local community have planted approximately 40% of the catchment. While we were there it rained really hard and the water in the waterways remained blue.”<sup>73</sup>; “The prioritisation of ecosystems and biodiversity seems to be missing...It would be really helpful if these types of outcomes could be achieved by preferencing the planting of native species. This would enhance the wairua of the Awa.”<sup>74</sup>; “Riparian planting is good because it tends to be marginal land that you cannot do a lot else with. Establishing trees has so much value.”<sup>75</sup>*

In regard to the rules proposed requiring only the retention of indigenous vegetation (RRMP 7)

were considered acceptable in regard to the benefits that they will achieve in improving water quality by the TANK group.

The social and cultural costs of the presently degraded water bodies are highlighted in the Cole et al Social & Cultural Impact report as significant with positive benefits identified in that report regarding indigenous vegetation planting in riparian margins.

kaitiaki and guardianship responsibilities is required.

Effectiveness

The regulatory component of the riparian management provisions will prevent the removal of existing indigenous riparian vegetation as a permitted activity and will require through the production land use rules the establishment of riparian vegetation to reduce sediment runoff to assist in meeting water quality objectives where required by Catchment Collectives, Industry Programmes or Farm Management Plans.

This approach will assist in meeting objectives 1, 3, 6, 7, 8 and 12 and will provide the regulatory contribution for achieving objective 11 and the appropriate management of riparian margins. It is noted that Objective 1b) seeks the protection of indigenous biodiversity, which proposed RRMP Rule 7

<sup>72</sup> Page 29

<sup>73</sup> Pages 33 & 34.

<sup>74</sup> Page 40.

<sup>75</sup> Page 34.

provides the opportunity to remove exotic vegetation and replant in native species without resource consent. Although exotic species could equally contribute to water quality improvements from shading, they would not offer the biodiversity, ecosystem and cultural benefits that appropriate indigenous vegetation can provide.

The amendment to RRMP 71 allows the riparian management policies to be achieved without requiring resource consent for planting within 6m of streams in the Karamū catchment, hence removing any disincentives to riparian planting.

The greatest environmental benefit is likely to be achieved by new riparian plantings which Schedule 5 will assist in requiring under the TANK production land use rules, particularly in the lowland catchments where benefits from shading will be greatest. Riparian plantings will also offer benefits across the TANK catchments in meeting the Production Land Use rules in reducing sediment runoff into waterways in the implementation of TANK Industry Programmes,

will achieve in regard to indigenous vegetation within 10m of waterways

In this way the provisions are considered effective in achieving the objectives.

**Efficiency**

The amendments to RRMP Rule 7 in requiring resource consent for the removal of indigenous vegetation within 10m of a water way is a more efficient than a blanket protection of all riparian vegetation. As a blanket approach would not encourage the removal of exotic species and replacement with indigenous vegetation and therefore be less efficient in achieving biodiversity, mauri and ecosystem objectives. The amendment to RRMP Rule 71 is also efficient in removing impediments to the planting of Riparian vegetation in the Karamū catchments.

As discussed under the Production Land Use provisions above, those rules provide flexibility to target riparian planting as a mitigation option where the greatest benefits can be obtained in order of catchment priority. The specific references in Schedule 5 to the Karamū and Lake Poukawa Catchments will ensure that the additional benefits of riparian planting in reducing

	<p>Catchment Collectives; and Farm Environment Plans.</p> <p>In regard to Economic Benefits, certainty is provided to existing Production Land Use Activities that they can continue provided that land management practices are changed where required, including by the planting of riparian margins, to meet TANK Industry Programmes or Catchment Collectives; or Farm Environment Plans.</p>	<p>temperature and increasing dissolved oxygen levels in those lowland waterways will be prioritised as part of TANK Industry Programmes or Catchment Collectives; or Farm Environment Plans within that catchment.</p> <p><b>Appropriateness</b></p> <p>Having regard to efficiency and effectiveness the proposed 'regulatory component of the riparian management' provisions are therefore considered appropriate in meeting the relevant objectives.</p>	
<p>Theme: Non-regulatory methods proposed for riparian management.</p> <p>Provisions: Policies 1 – 4 and 9 – 11.</p> <p>Summary of Provisions:</p> <p>The policies as set out in Table 31 above establish both regulatory and non-regulatory approaches to riparian management. Of the priority management approach water quality policies (1 – 4), Policy 2 applying to the Clive / Karamū Rivers and their tributaries places an emphasis on riparian vegetation in reducing water</p>	<p>The direct instream water quality benefits of retained or increased riparian vegetation are explained in Table 30 above and while other environmental benefits are explained in the regulatory methods in the row above and need not be repeated here.</p> <p>It is noted that in addition to riparian planting, non-regulatory methods referred to in Policy 2 include physical removal of aquatic plants in the Clive / Karamū Rivers and their tributaries which will enable water quality improvements to be achieved in the interim period before the benefits of</p>	<p>There is a potential cultural cost in direct macrophyte removal methods if water cress and other mahinga kai species are removed.</p> <p>The economic costs of direct Council works and funding contributions to riparian planting will be borne by ratepayers. The social, cultural and environmental benefits to the wider public however assist in justifying such cost.</p> <p>Weed control in fenced off riparian areas is a cost. Weeds may initially pose a risk to new riparian plantings and if there is no</p>	<p>Refer to the row above for a summary of the relevant objectives.</p> <p>Objective 15 is particularly relevant to the non-regulatory policies in requiring Council, tangata whenua and urban and rural communities working together in a way that recognises the kaitiaki and guardianship roles that each play in freshwater management.</p> <p>Collectively the objectives require improvement in degraded waterbodies of all attributes, including by land uses reducing contaminant losses and sedimentation with</p>

temperature and increasing the level of dissolved oxygen through shading and a subsequent reduction in macrophyte growth. This policy specifically states that Council will establish riparian vegetation and physically remove aquatic plants (macrophytes) in the short term.

Policies 9 – 11 as set out in Table 31 above are specifically focussed on the environmental benefits of riparian management. Policy 9 specifically states that Council will promote and support the establishment of riparian vegetation; Policy 10 states that Council will 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; and Policy 11 states that Council will support improvement of riparian management by working with industry groups and

increased shading from riparian vegetation are realised.

Policies 9 – 11 would provide the opportunity for community involvement in establishing riparian plantings. The benefits of such an approach are supported by some of the commentary in the Cole et al Social and Cultural impact assessment, which includes the following comments from reference group members: *“Planting of this kind contributes many different social, cultural and ecological values into communities...When combined with walkways, these areas contribute spiritual, recreational and aesthetic values to the community”*<sup>77</sup>; *“I belong to a church group that has a spiritual connection with the Karamu river...We have been doing the riparian planting. This activity has numerous benefits for our church members.”*<sup>78</sup>; *“We decided to undertake a restoration project...The members of our community can now enjoy the trees and bird life that wasn’t there before.*

subsequent weed control weeds can be spread from riparian margins. Mitigation options are available with associated financial costs.

Planting and fencing can restrict access to the stream channel for channel clearance and flood control activities, however provision can be made in planting plans to leave vehicle access space where appropriate.

recognition of kaitiaki and guardianship responsibilities.

**Effectiveness**

With riparian management there is a mixture of private and public land involved, it is therefore important that non-regulatory methods are used on the public land to complement planting required by regulation on the private land. Taken together the riparian management provisions are likely to be effective in achieving the abovementioned objectives.

**Efficiency**

There will be a public cost involved borne by the ratepayer in the proposed non-regulatory riparian management initiatives. As set out in the benefits column there are significant environmental, social and cultural benefits to be gained from enhanced riparian management in justifying such cost.

**Appropriateness**

Having regard to efficiency and effectiveness the proposed direct the proposed non-

<sup>77</sup> Page 29

<sup>78</sup> Page 31.

land owner collectives to identify where riparian management is to be improved, providing information about appropriate riparian planting, and providing funding assistance for riparian vegetation improvements.

*This has created a community amenity...There are lots of people who now use this walkway because they enjoy the plants and the bird life...this has created a spiritual connection for us”<sup>79</sup>; “Riparian planting is a really important contribution that can be made by community groups.”<sup>80</sup>; “The TANK plan presents a real opportunity to offer potential ‘cultural’ benefits to children in our communities by giving them a real sense of purpose. This could include riparian planting or ...”<sup>81</sup>*

The non-regulatory methods proposed in these TANK policies promote riparian plantings on public land to complement those that will be required on private land under the Production Land Use rules and Schedule 5. This is particularly so in the lowland catchments where benefits from shading will be greatest.

Opportunity to achieve cultural benefits can also be achieved in providing advice and funding for riparian plantings which will have

regulatory methods for riparian land management, are therefore considered appropriate in meeting the above mentioned objectives.

<sup>79</sup> Page 31.  
<sup>80</sup> Page 33.  
<sup>81</sup> Page 38.

regard to providing for mahinga kai  
(through habitat enhancement),  
Taonga rarangaand taonga rongoa  
and the mauri of the river.

### 8.3.2 Risk of Acting or Not Acting

An RMA section 32 evaluation report must contain an assessment of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions (under section 32(2)(c) the RMA). The reason for adopting the 'riparian management provisions' in Change 9 is due to the tangible environmental, social and cultural benefits that can be achieved from the retention of indigenous riparian vegetation and the appropriate planting of riparian vegetation. These include the water quality benefits from shading and reduced macrophyte growth in lowland water ways and reduced sediment and overland flow runoff to all water ways.

Not acting at all is not an option due to the need for Change 9 to give effect to the higher order resource management instruments including the Regional Policy Statement (Change 5) and the NPSFM which require improvements in water quality from the status quo.

As such there is little risk of acting in the manner proposed which will ensure improvements in the water quality of the TANK catchments over time.

### 8.3.3 Conclusion

This above assessment demonstrates that the proposed provisions, relating riparian management, are the most appropriate for achieving the objectives of Change 9.



## 8.4 LAND DRAINAGE AND WETLAND MANAGEMENT

### 8.4.1 Introduction

The provisions assessed in this category include the Change 9 amendments to RRMP Rules 32 & 33 and new RRMP Rule 32A (all relating to drainage water). It also includes 'Wetland Management' policies 12 and 13 and aspects of the surface water quality 'priority management approach' policies 1 – 5 relating to drainage and policy 3 relating specifically to lakes and wetlands in the TANK catchments. The Production Land Use rules and specific references in Schedule 5 to drains and wetlands are also relevant to the regulation of water quality regarding land drainage and wetlands.

The existing RRMP Rule 32 permits "The diversion and discharge of drainage water into water or onto or into land, from a gravity flow system (without pumping)" subject to six performance standards being met". In summary these standards require:

- No adverse flooding effects on neighbouring properties.
- No scouring or erosion beyond the point of discharge.
- The activity shall not adversely affect any wetland.
- Shall not cause a change in the temperature of the receiving water by more than 3°C.
- Discharges shall be to the same catchment as to which the water would naturally flow.
- Any suspended solids in the discharge shall comply with Policy 72.

Change 9 would add an additional condition as follows:

*(g) Ten years after the date of notification in the TANK WQMZs dissolved nutrient and sediment concentrations in the receiving water after reasonable mixing shall not increase as a result of the discharge when measuring:*

- (i) DIN*
- (ii) DRP*
- (iii) suspended sediment*

The discharge water would therefore need to be of a similar quality to the receiving water.

Existing RRMP Rule 33 is essentially the same as Rule 32 except that it relates to pumped systems and requires controlled activity resource consent. Change 9 would add the same condition to Rule 33 as that set out above for Rule 32.

Change 9 also adds a new RRMP Rule 33A applying in TANK Water Quality Freshwater Management Units for pumped systems draining less than 10ha of land as a permitted activity subject to the same conditions outlined above for Rule 32.



Policies 12 and 13 relate specifically to wetland management with policy 13 relating to non-regulatory approaches for the restoration and extension of natural wetlands and the reinstatement or creation of additional wetlands.

Under Schedule 5, Industry Programmes, Catchment Collectives and Farm Management Plans are required to, address water quality with reference to wetland management including to meet the outcomes specified in Policies 12 and 13.

#### 8.4.2 Statutory Context

##### 8.4.2.1 Resource Management Act 1991 (RMA)

The land drainage and wetland management provisions of Change 9 seek to enable drainage of production land provided water quality is protected and to restore and reinstate wetlands.

Such an approach is consistent with section 5 in enabling the farming community to provide for their economic well-being while supporting the environmental protection clauses of RMA section 5(2)(a)-(c).

This policy direction to also enhance and reinstate wetlands in Change 9 also recognises and provides for the matters of national importance listed in sections: 6(a) *the preservation of the natural character of ... wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;* and 6(e) *the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga*:

These provisions also have regard to sections 7 (a) *kaitiakitanga*; (c) *the maintenance and enhancement of amenity values*; (d) *intrinsic values of ecosystems*; (f) *maintenance and enhancement of the quality of the environment*; and (h) *the protection of habitat of trout and salmon*.

The Council has a number of functions under section 30(1) of the RMA that are relevant to land drainage and wetlands. They include:

- Establishing, implementing and reviewing objectives, policies and methods to achieve integrated management of the natural and physical resources of the region (section 30(1)(a)).
- Preparing objectives and policies in relation to any actual or potential effects of the use, development or protection of land which are of regional significance (section 30(1)(b)).
- The control of the use of land for the purpose of (section 30(1)(c)):
  - soil conservation (i);



- the maintenance and enhancement of the quality of water in water bodies (ii), and
- the maintenance and enhancement of ecosystems in water bodies (iii);
- The control of discharges of contaminants into or onto land or water, and discharges of water into water (section 30(1)(f)).
- If appropriate, setting rules in a regional plan to allocate the water quality, i.e. the capacity of water to assimilate a discharge of a contaminant (section 30(1)(fa)(iv))
- the establishment, implementation, and review of objectives, policies, and methods for maintaining indigenous biological diversity (section 30(1)(ga))

#### 8.4.2.2 National Policy Statement for Freshwater Management 2014 (NPSFM)

The NPSFM (as summarised in section 3.4.1 of this report above) requires values and attributes to be assigned to Freshwater Management Units (FMUs) by engagement with the community including tangata whenua. The NPSFM includes two compulsory values, ('ecosystem health' and 'human health for recreation') and a list of optional 'other national values' that may be assigned to FMUs, including:

- *Natural form and character;*
- *Mahinga kai*

These values can both be enhanced by appropriate wetland management.

Other optional national values relevant to land drainage include:

- *Irrigation, cultivation and food production*

Objective A1 of the NPSFM reflects the above-mentioned compulsory values in requiring the safeguarding of the life supporting capacity of freshwater and the health and safety of communities as affected by contact with fresh water, in sustainably managing the use of land and discharge of contaminants.

Objective A2 of the NPSFM requires the overall quality of fresh water within catchments to be maintained or improved. In many locations within the TANK catchments water quality is below the objective levels set in Schedule 1 of Change 9.

Objective B1 includes safeguarding of life supporting capacity, ecosystem processes and indigenous species in sustainably managing the diverting of freshwater.

Objective B4 is to protect significant values of wetlands and of outstanding freshwater bodies.

Objective C1 and Policy C1 of the NPSFM require regional councils to improve integrated management of freshwater and the use and development of land. These provisions are pertinent in regard to land drainage.



#### 8.4.2.3 Regional Policy Statement (RPS)

Objective LW1 requires that *"Freshwater and the effects of land use and development are managed in an integrated and sustainable manner..."* The subclauses of Objective LW1 include the following matters that are relevant to the proposed TANK land drainage and wetland management provisions:

- 1A. Protecting wetlands, including their significant values<sup>82</sup>;
- 2. The maintenance of the overall quality of freshwater within the Hawke's Bay region and the improvement of water quality in water bodies that have been degraded to the point that they are over allocated;
- 4. Safeguarding the life supporting capacity and ecosystem processes of freshwater, including indigenous species and their associated freshwater ecosystems;
- 12. Recognising and providing for ...flood protection activities;
- 14. Promoting the preservation of the natural character of... wetlands, and their protection from inappropriate subdivision, use and development.

Objective LW3 'Tangata whenua values in management of land use and freshwater' is set out in full under section 8.3.2.3 above in regard to the riparian provisions of Change 9. Similarly, the restoration and reinstatement of wetlands would assist in achieving Objective LW3.

Policy LW1 seeks to implement the above objectives through 'catchment based integrated management'. Of relevance to the land drainage and wetland management provisions, clause (1) of this policy requires the adoption of an approach for each catchment area that:

- 1.b) provides for mātauranga a hapū and local tikanga values and uses of the catchment;
- 1.c) provides for the inter-connected nature of natural resources within the catchment area, including the coastal environment;
- 1.cB) recognises and manages the co-existing values of wetland habitat and agricultural production<sup>83</sup>;
- 1.e) promotes collaboration and information sharing between relevant management agencies, iwi, landowners and other stakeholders;

<sup>82</sup> This provision is as amended by the final decision of the Environment Court on the Change 5 Appeals (ENV-2013-WLG-054) dated 7 June 2019. It also includes the following associated footnote: "While significant values of wetlands can include nutrient filtering, flood flow attenuation, sediment trapping and cultural, spiritual, recreational, aesthetic and educational values, their values as habitat to fish, invertebrate, plant and bird life is likely to be significant for wetlands across the region."

<sup>83</sup> This provision is also as amended by the final decision of the Environment Court on the Change 5 Appeals (ENV-2013-WLG-054) dated 7 June 2019



- 1.gA involves working collaboratively with the catchment communities and their nominated representatives; and
- 1.h) ensures the timely use and adaptation of statutory and non-statutory measures to respond to any significant changes in resource use activities or the state of the environment;

Clause 2 of Policy LW1 states that when setting preparing regional plans:

- Identify the values for freshwater and wetlands and their spatial extent within each catchment,...<sup>84</sup>

Clause 3 of Policy LW1 states that when setting objectives ensure:

- a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water are safeguarded; and
- b) adverse effects on water quantity and water quality that diminish mauri are avoided, remedied or mitigated; and...

The land drainage and wetland management provisions in Change 9 will help achieve RPS policy LW1(3).

Policy LW1(4) sets out matters to be given regard when setting methods and timeframes to achieve limits and targets as follows:

- a) allowing reasonable transition times and pathways to meet any new water quantity limits or new water quality limits included in regional plans. A reasonable transition time is informed by the environmental and socio-economic costs and benefits that will occur during that transition time, and should include recognition of the existing investment

Proposed RRMP Rules 32, 33 and 32A by Change 9 provide a timeframe of 10 years from notification of Change 9 for drainage water to be of a standard not to increase dissolved nutrient and sediment concentrations in the receiving water as is consistent with the 'reasonable transition time' provided for by RPS Policy LW1(4).

Policy LW2 includes:

...1. Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3: a) Greater Heretaunga / Ahuriri Catchment Area;...

3. When managing the freshwater bodies...: a) recognise and provide for the primary values and uses identified in Table 1; and b) have particular regard to the secondary values and uses identified in Table 1;...

<sup>84</sup> Ibid.



The primary values for the TANK catchments, which in Table 1 are referred to as the Greater Heretaunga / Ahuriri Catchment Area, include values that are associated with or would be enhanced by appropriate land drainage and wetland management, being:

- Any regionally significant native water bird populations and their habitats
- Cultural values and uses for: mahinga kai, nohoanga, taonga raranga and taonga rongoa
- Native fish habitat in the Ngaruroro River and Tutaekuri River catchments
- Recreational trout angling and trout habitat in ...(specified rivers):
- Trout spawning habitat

Relevant secondary values, include:

- Amenity for contact recreation (including swimming) in lower Ngaruroro River, Tutaekuri River and Ahuriri Estuary
- Any locally significant native water bird populations and their habitats
- Native fish habitat, notwithstanding native fish habitat as a primary value and use in the Tutaekuri River and Ngaruroro River catchments
- Recreational trout angling, where not identified as a primary value and use
- Trout habitat, where not identified as a primary value and use

The following amendments resulting from Change 5 to other RRMP objectives and policies are also relevant to the land drainage and wetland management provisions of Change 9:

*POL 4A To use both non-regulatory and regulatory methods for protecting significant values of wetlands.*

*POL 4 To use non-regulatory methods, as set out in Chapter 4, as the primary means for achieving the preservation and enhancement of remaining areas of significant indigenous vegetation and ecologically significant wetlands, in particular:*

*...*

*(b) Works and services – Providing works and services, or financial support, for the preservation of remaining ecologically significant indigenous wetlands at a level of funding established in HBRC's Annual Plan, subject to a management plan or statutory covenant being established for each wetland receiving assistance...*

*OBJ 25 The quantity of water in wetlands...is suitable for sustaining aquatic ecosystems, for achieving other freshwater objectives, and ensuring resource availability for a variety of purposes across the region, while recognising the impact caused by climatic fluctuations in Hawke's Bay.*

*OBJ 27 The water quality in rivers, lakes and wetlands is suitable for sustaining or improving aquatic ecosystems and other freshwater objectives identified in accordance with a catchment based process as set out in Policy LW1 and Policy LW2, including contact recreation purposes where appropriate.*

*OBJ 27A Riparian vegetation on the margins of rivers, lakes and wetlands is maintained or enhanced in order to:*



- a) maintain biological diversity;
- b) maintain and enhance water quality and aquatic ecosystems; and
- c) support the use of surface water resources in accordance with tikanga Māori.

These objectives and policies provide direction to primarily use non-regulatory methods for the enhancement of wetlands (POL 4). However, POL 4A, Obj 25, Obj 27 and Obj 27A also provide for regulation in improving surface water quality including from land drainage.

The final decision of the Environment Court on the Change 5 Appeals (ENV-2013-WLG-054) dated 7 June 2019 also amends the definition of wetlands in the RRMP which is as follows:

1. in the RPS (only), it includes:

- (a) permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions: and
- (b) those areas mapped in Schedule 24 (a to d) and commonly known as:
  - i) Lake Whatuma (previously known as Hatuma);
  - ii) Atua Road north swamp;
  - iii) Wanstead Swamp;
  - iv) Lake Poukawa.

2. in the regional plan (only), it includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions, except for:

- (a) Wet pasture or cropping land;
- (b) artificial wetlands specifically designed, installed and maintained for any of the following purposes:
  - i) wastewater or stormwater treatment;
  - ii) farm stock water dams, irrigation dams, and flood detention dams;
  - iii) reservoirs, dams and other areas specifically designed and established for the construction and / or operation of a hydro-electric power scheme;
  - iv) land drainage canals and drains;
  - v) reservoirs for fire fighting, domestic or municipal supply;
  - vi) beautification or recreation purposes.

### 8.4.3 Relevant Objectives of Change 9

Given the statutory context provided above, it is those objectives relating to: water quality protection including providing for the values of mauri and ecosystem health and by mitigating sediment loss; natural character; kaitiakitanga; and the improvement of indigenous biodiversity and the maintenance and improvement of freshwater in wetlands



that are relevant to the wetland management provisions. Those objectives addressing water quality (including the setting of timeframes for improvement) are also relevant to land drainage as are those enabling discharges and diversions of freshwater. Therefore, the evaluation of the appropriateness of the provisions should be against the following relevant Change 9 objectives: 1, 2, 3, 6, 7, 8, 10, 12 and 15 (see section 7.2 above). Objective 10 is the most specific objective to Land Drainage and Wetland Management and for convenience is quoted as follows:

*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 Wetland and lake waahi taonga within the TANK catchments is managed so that mauri, water quality and flows, and levels are maintained and improved to enable;*

- 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 200 hectares of existing wetland and reinstating or creating 100ha of additional wetland by 2040;*

#### 8.4.4 Overview of Practicable Options

The status quo regulation applying to land drainage is the existing RRMP Rules 32 and 33 as summarised under section 8.4.1 above which provide for gravity systems as a permitted activity (Rule 32) and pumped systems as a controlled activity (Rule 33) subject to compliance with the specified conditions. None of the specified conditions regulate the dissolved nutrient levels of the drainage water. Suspended solids in the discharge are required to comply with RRMP Policy 72, which includes the following guidelines for suspended solids:

- (i) *At times when the suspended solids concentration is less than the specified guideline for a particular water body and location, an activity should not cause, or contribute to, a breach of the specified guideline. In no case should an activity cause more than a doubling of the suspended solids concentration or turbidity of the receiving water body.*
- (ii) *At times when the suspended solids concentration is equal to or greater than the specified guideline, an individual activity should not cause the concentration of suspended solids or the turbidity in any river or lake to increase by more than 10%, as determined on a case by case basis.*

This contrasts with the proposed addition in Change 9 to these rules where, suspended sediments in the discharge water will be required to be at a level that does not increase the concentrations in the receiving water from 10 years after the plan change becomes operative.



Given the statutory context set out above it is not an option to enable drainage water discharges to reduce the water quality of the receiving water, noting in particular the 'continuous improvement approach' sought by Change 9 Objective 1b), and the requirement for improvement of degraded water bodies in Change 9 Objective 2. In turn these objectives seek to give effect to NPSFM Objective A2 in maintaining or improving water quality; and Objective 27 of the RPS (post Change 5) in the water quality of rivers, lakes and wetlands being suitable for sustaining or improving aquatic ecosystems.

Existing RRMP Land Drainage Rules 32 and 33 do both have an existing condition protecting wetlands being:

*The activity shall not adversely affect any wetland.*

Although that condition is not proposed to change, Change 9 Policy 12 would help define what an adverse effect on a wetland is within the TANK catchments. Further to this the Production Land Use rules and the associated Schedule 5, requires water quality to be addressed in regard to "wetland management including to meet the outcomes specified in Policies 12 and 13." There is no equivalent regulation in the RRMP requiring production land activities to address the freshwater quality and other values of wetlands.

The status quo regulation within the RRMP does not protect water quality in regard to land drainage activities, nor the water quality and other values of wetlands, to a sufficient level to meet the higher order statutory instruments set out above. Accordingly, the status quo RRMP provisions are not a viable option for managing land drainage and wetlands within the TANK catchments.

In considering practicable options in formulating the Change 9 provisions relating to wetlands and lakes it is noted that there was a 'TANK Lakes and Wetlands Working Group' (LWWG), who reported their findings to the main TANK Collaborative Stakeholder Group, including a report to TANK Group meeting #40 on 31 May 2018. This included a recommendation to endorse the approach to sediment and nutrient management (as discussed above in the assessment of the Production Land Use and Riparian Management provisions) as also being generally suited to the management of sediment and nutrients in catchments of TANK shallow lakes.

Another recommendation from the abovementioned report of the LWWG was for the TANK provisions to integrate lakes (and their wetland margins) into the broader package applied to rivers, streams, groundwater and estuaries. This has resulted in Change 9 Objective 10 and Policy 3, both of which apply to the freshwater quality of lakes and wetlands. The recommendations went onto say that the TANK plan change does not need to create entirely new sets of rules specifically relating to lakes, particularly the quality and quantity of water. This is because the general water quality and flow management regime rules also cover lakes and wetlands.



The LWWG report noted<sup>85</sup> an important distinction in relation to macrophytes to that discussed under the Riparian Management Provisions above:

*To put it simply, for healthy functioning ecosystems we need more rooted aquatic plants in these shallow lakes than what we have now, but we need less aquatic weeds in the lowland streams than what we have now. In shallow lakes where there is low plant growth where planktonic algae dominate, even exotic species is better than nothing.*

Hence clause (ii) in Policy 3: "improve water quality by increasing macrophyte plant growth in shallow lakes."

**Table 33– Land Drainage and Wetland Management**

Ref	Provision / Provision Summary
Policy 1.	<p>The Council with landowners, local authorities, industry and community groups, mana whenua and other stakeholders will regulate or 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 targets shown in Schedule 1 by prioritising;</p> <ul style="list-style-type: none"> <li>a) water quality improvement in sub-catchments ...where water quality is not meeting specified freshwater quality targets;</li> <li>b) sediment management ...</li> <li>c) the significant environmental stressors of excessive sedimentation ... and nutrient loads entering the Ahuriri and Waitangi estuaries;...</li> </ul>
Policy 2.	<p>In the Clive/Karamu Rivers and their tributaries, in addition to Policy 1 the Council will;</p> <ul style="list-style-type: none"> <li>a) reduce water temperature and increase the level of dissolved oxygen by...</li> <li>c) reduce the amount of sediment and nutrients entering the freshwater from adjacent land</li> <li>d) improve stormwater and drainage water quality and the ecosystem health of urban waterways....</li> </ul>
Policy 3.	<p>In lakes and wetlands in the TANK Catchments, in addition to Policy 1 the Council will;</p> <ul style="list-style-type: none"> <li>a) work at a catchment scale with land owners on the wetland or lake catchment (refer Policies 21 ad 22) to;</li> <li>(i) reduce sediment and nutrient inputs into the waterbody</li> <li>(ii) improve water quality by increasing macrophyte plant growth in shallow lakes</li> <li>(iii) improve ecosystem health and water quality by excluding stock and improving riparian management</li> <li>(iv) meet water quality objectives in Schedule 1 for water bodies downstream of the lake or wetland</li> </ul>

<sup>85</sup> Page 3, paragraph 4.1



(v) support and assist landowners to protect, increase or restore existing wetlands or create new wetlands including for the management of urban stormwater.

Policy 4. In the lower Ngaruroro and Tūtaekurī 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.

Policy 5. In the tributaries of the Ahuriri Estuary, in addition to Policy 1 the Council will work with mana whenua, landowners and the Napier City Council to;

- 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.

Policy 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.

Policy 13. The Council will support and encourage the restoration and extension of natural wetlands and the reinstatement or creation of additional wetlands 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.

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Rule *Diversion and discharge of land drainage water into water (gravity drainage systems) –*  
 RRMP *Permitted Activity provided the existing RRMP conditions are complied with along with the*  
 32 *following condition added by Change 9:*

*Except in the TANK WMZ*

*(g) After <10 years after date of notification> in the TANK WQMZs dissolved nutrient and sediment concentrations in the receiving water after reasonable mixing shall not increase as a result of the discharge when measuring*

- (i) DIN*
- (ii) DRP*
- (iii) suspended sediment.*

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Rule *Diversion and discharge of drainage water into water or onto or into land, from a pumped*  
 RRMP *system – Controlled Activity provided the existing RRMP conditions are complied with*  
 33 *along with the following condition added by Change 9:*

*Except in the TANK FMUs (quality)*

*(g) After <10 years after date of notification> in the TANK FMUs (quality) 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*

- (i) DIN*
- (ii) DRP*
- (iii) suspended sediment.*

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New Rule *The diversion and discharge of land drainage water from an existing pumped drainage*  
 33A *system (small scale) – Permitted Activity provided the following conditions are complied with:*

- (a) The discharge is in a TANK Water Quality Freshwater Management Unit.*
  - (b) The pumped drainage system existed at <date of notification>.*
  - (c) The land area being serviced by the drainage network is less than 10ha.*
  - (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.*
  - (e) The discharge shall not cause any scouring or erosion of any land or any watercourse beyond the point of discharge.*
  - (f) The activity shall not result in any changes to water levels in any connected wetland*
  - (g) The discharge shall not cause the natural temperature of any receiving water to be changed by more than 3°C from normal seasonal water temperature fluctuations, after reasonable mixing.*
- 



*(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.*

*(i) After <10 years after date of notification> in the TANK FQMs dissolved nutrient and sediment concentrations in the discharge water are no more than in the receiving water after reasonable mixing shall not increase as a result of the discharge when measuring*

- (i) DIN*
- (ii) DRP*
- (iii) suspended sediment.*

Schedule 5 Landowner Collective, Industry Programme and Farm Environment Plan - sets out the requirements for Catchment Collective, Industry Programme and Farm Environment Plans including environmental outcomes which include:

1.1 Information requirements:

j) locations of (i) drains (including subsurface drains), streams, rivers, wetlands and other water bodies.

2.2 d) Wetland management to meet the outcomes specified in Policies 12 and 13.



8.4.5 Assessment of the Appropriateness of the Provisions

The assessment of the changes to the policies, rules and other methods under sections 32(1)(b) and (2)(a) of the Act, is provided in Table 32 below. The new policies, amended and new RRMP rules and other methods (Schedule 5 ) included in this plan change are set out under Table 31 above and assessed for their appropriateness in achieving the objectives of the Plan Change below.

The reports listed in Table 28 above regarding the potential economic, social and cultural effects of Change 9 are referred to in the assessment provided in Table 34:

Table 34- Assessment of the Land Drainage and Wetland Management Provisions under sections 32(1)(b)(ii) and (iii), 32(2) (a) and (b) and 32(3) of the Act

Theme, Provisions and Summary of Provisions	Assessment Under RMA Section 32(2)		Assessment under RMA Section 32(1)(b)
	Environmental, Economic, Social and Cultural Benefits	Environmental, Economic, Social and Cultural Costs	Having regard to the appropriateness of the provisions by assessing their efficiency and effectiveness in achieving the objectives
<p>Theme: Land Drainage.</p> <p>Provisions: Policies 1 – 5; Rules RRMP 32, 33 and new 33A; and Schedule 5 in association with the Production Land Use rules.</p> <p>Summary of Provisions:</p>	<p>Land drainage results in discharge to surface water and can be from either pumped or gravity systems. It is therefore a component, along with diffuse discharges, of production land use activities that can affect the quality of surface water bodies.</p> <p>Improvements in the quality of drainage water from a reduction in dissolved nutrient and suspended</p>	<p>In considering economic costs, Schedule 5 ultimately requires mitigation to achieve the water quality outcomes in schedule 1 for surface water bodies. The new condition that Change 9 proposes for the land drainage rules will also ultimately require mitigation to achieve the water quality outcomes in schedule 1</p>	<p>Objectives: 1, 2, 3, 6, 7, 8, 10, 12, and 15 Identified in section 8.4.3 as being the most relevant to these provisions. For convenience the objectives are summarised as follows:</p> <p>Objective 1 relates to establishing the Objectives in Schedule 1; Objective 2 seeks to mana o te wai (integrated mountains to the</p>

Policies 1 – 5 as set out in Table 33 above relate to the priority management approach for surface water quality. Improving the quality of land drainage water is a component of achieving improved water quality and ecosystem health in surface water bodies within the TANK catchment. Policy 1 seeks that where required water quality shows an improving trend to the attribute targets of Schedule 1. Policies 2 – 4 are specific to improving water quality in the Clive / Karamu Rivers, lakes and wetlands, the lower Ngaruroro and Tūtaekuri Rivers and the Ahuriri Estuary.

The amendments to RRMP Land Drainage Rules 32 and 33 and new Rule 33A set a 10 year timeframe in which drainage discharges from the TANK catchments would need to not increase the dissolved sediment and nutrient concentrations in the receiving water. New Rule 33A allows existing small scale pumped drainage systems within the TANK catchments as a permitted

sediment concentrations will have a corresponding benefit in the quality of water in the receiving water body downstream of the discharge.

In this respect the environmental benefits of the land drainage provisions mirror those of the production land use provisions as set out in Table 29 above and would be an improvement in the water quality of water bodies that are currently degraded from nutrient and sediment discharges.

In regard to Economic Benefits, certainty is provided to existing Production Land Users that they can continue to drain their land, but must within 10 years of Change 9 being notified implement management systems to ensure that the drainage water can meet the required dissolved nutrient and sediment limits. This allows time for innovation and management practice changes to take place in attempting to meet these

As set out in the Production Land Use assessment in Table 29 above, the Nimo Bell reporting showed an increased expenditure of 1% resulting from the sediment and nutrient reduction mitigation for the horticultural model. The more significant contributor to revenue loss was from the reduced irrigation.

The results for pastoral farming was a 6% reduction in revenue where both sediment and nutrient mitigation is applied and some change to forestry is included.

Those are the general results of all mitigation measures some of which will be less relevant to land drainage water quality. The nitrogen reduction mitigation for the 'MS2' scenario<sup>85</sup> referred to in the Agfirst report<sup>87</sup> is a directly relevant mitigation: *"By optimising fertiliser usage, and selection of crops that continue to uptake nitrogen in the winter along with practices to reduce sediment output (including land use change) a 13% reduction in nitrogen losses to water was*

sea) and continuous improvement approaches to the management of freshwater; Objective 3 is for the Schedule 1 values, particularly mauri and ecosystem health to be achieved through collectively managing the attributes; Objectives 6, 7 & 8 relate to improving and maintaining mauri, water quality and water quantity in the Ngaruroro, Tūtaekuri and Karamu / Clive River catchments respectively; Objective 10 seeks to maintain and improve mauri, water quality and flows and levels in wetlands and lakes and to increase the total wetland area; Objective 12 seeks land use to be carried out in a manner that reduces contaminant loss and sedimentation in water bodies; and Objective 15 requires Council, tangata whenua and urban and rural communities working together in a way that recognises the kaitiaki and guardianship roles that the each play in freshwater management.

Collectively then these objectives require improvement in degraded waterbodies including by land uses reducing nutrient and

<sup>85</sup> Modelled farm management scenarios to reduce sediment loss to water by 30% and nitrogen loss to water by 10%.

<sup>87</sup> Part 2 of the TANK catchment, economic, social and ecological impact assessment, Agfirst, March 2018 (Page 67).

activity subject to compliance with the conditions. Other pumped systems require controlled activity resource consent.

The Production Land Use rules are also relevant in reducing sediment and nutrient discharges from such land including into drainage water. The information requirements of Schedule 5 for Industry Programmes, Catchment Collectives and Farm Management Plans include plans or aerial photographs showing the location of drains including subsurface drains.

requirements while maintaining economic levels of production.

The continues use of permitted and controlled activity rules for RRMP 32 and 33 respectively, and a permitted activity status for Rule 33A, provide land users certainty subject to achieving the conditions.

The required catchment collective, industry programme or farm management plans under TANK rules 1 & 2 and Schedule 5, in combination with the 10 year lead in period for the new condition in the Land Drainage rules will provide opportunity for land users to use this collective process to work out how to achieve the required reductions in sediment and nutrients in drainage water, rather than be faced with the challenge on their own.

*modelled. The reduction in fertiliser helped reduce the impact of a change in cropping policy, so that the average EBIT by reducing N losses decreased to \$99,198...down from the base average EBIT of \$113,736, a total reduction of \$14,538 or 15% from the base."*

As stated above however the general economic modelling concluded that such mitigation costs although potentially significant for individual farms, do not result in as significant economic costs on a region wide basis in comparison to reductions in the availability of water for irrigation would. Furthermore, these costs were considered acceptable in regard to the benefits that they will achieve in improving water quality by the TANK group.

The social and cultural costs of the presently degraded water bodies are highlighted in the Cole et al Social & Cultural Impact report as significant.

sediment losses. Land drainage activities therefore need to accord with this.

**Effectiveness**

The additional condition proposed to rules 32 & 33 and new rule 33A ensure that the regulation applying to land drainage addresses the water quality improvements sought by objectives 1 - 3, 6 - 8 and 10. The additional condition specifically regulates sediment and nutrient concentrations in drainage water which gives effect to Objective 12. Objective 15 is given effect to by the relationship of the land drainage provisions to the TANK 1 and 2 Production Land Use Rules and associated Schedule 5. It is the processes through those rules that will lead to improvements in nutrient and sediment concentrations in freshwater and will help determine practicable mitigation measures to improve the quality of drainage water.

In this way the provisions are considered effective in achieving the objectives.

**Efficiency**

The approach in RRMP rules 32, 33 and 33A of tying the sediment and nutrient

concentrations in the drainage water to such concentrations in the receiving water is a more efficient way of achieving the objectives than setting actual limits would be. Fixed limits could result in the drainage water having to achieve lower concentrations of nutrients than the receiving water, which could not be justified on an effects basis. It could also result in sediment and nutrient concentrations in the drainage water being significantly higher than in the receiving water which would not be able to be justified on an environmental costs basis.			
The proposed approach is consistent with the approach adopted through the Production Land provisions of Change 9 and on that basis is the most efficient way of achieving the objectives.			
<b>Appropriateness</b>			
Having regard to efficiency and effectiveness the proposed land drainage provisions are therefore considered appropriate in meeting the relevant objectives.			
Theme: Wetland Management.	The policy approach of protecting, restoring and increasing wetlands is of social and cultural benefit as is	The economic costs of direct Council works and funding contributions to wetland enhancement and creation will	Refer to the row above for a summary of the relevant objectives.

Provisions: Policies 3, 12 and 13 and Schedule 5.

Summary of Provisions:

Policy 3 is a water quality priority management approach policy specific to lakes and wetlands and references the Industry Programme and Catchment Collective policies in improving water quality and ecosystem health in lakes and wetlands. It also includes a non-regulatory clause in supporting and assisting landowners to protect, increase or restore existing wetlands or create new wetlands.

Policies 12 and 13 relate specifically to wetland management. Policy 12 sets out the wetland values to be achieved by regulatory and non-regulatory methods. Policy 13 provides the policy for the non-regulatory approach for restoring and extending natural wetlands or creating new wetlands.

supported by some of the commentary in the Cole et al Social and Cultural Impact assessment, which includes the following comments from reference group members: *"What has happened to all of our wetlands? Are these going to be restored and protected in the future."*<sup>88</sup> The Cole et al assessment also includes comments from reference group members concerned with the lack of abundance of traditional weaving or taonga raranga material that is associated with wetlands: *"We used to gather harakeke and pīngao for waving...it is really hard to find pīngao flax now. It has to be brought in from other areas like Rotorua. The replanting of pīngao flax should be compulsory in all of our rivers."*<sup>89</sup> *"NgāWhenua Rāhui has identified one remaining Tai Tai plant in all of Hawke's Bay. In earlier times this plant species was prolific and was used by local Māori communities as a construction material."*<sup>90</sup>

be borne by ratepayers. The social, cultural and environmental benefits to the wider public however assist in justifying such cost.

Wetland enhancement and creation is sought through Policy 13 as a non-regulatory method so the financial costs of carrying out such activities and the associated loss of production land would not be forced upon landowners.

In some circumstances there are likely to be benefits in wetland enhancement in achieving the water quality improvements and sediment and nutrient reductions required by the TANK production land use provisions.

Objective 15 is particularly relevant to the non-regulatory policies in requiring Council, tangata whenua and urban and rural communities working together in a way that recognises the kaitiaki and guardianship roles that each play in freshwater management.

Collectively the objectives require improvement in degraded waterbodies of all attributes, including by improving the quality and extent of wetlands in the TANK catchments.

Effectiveness

Commitment will be required from the Council in allocating LTP funding for wetland enhancement to meet the non-regulatory commitments in policies 12 and 13. The adaptive management approach to the Production Land Use rules also provides some scope for wetland enhancement to be achieved through the catchment collectives and industry groups involved in that process. In conjunction with the TANK production land use provision the non-regulatory wetland

<sup>88</sup> Page 30.

<sup>89</sup> Page 35.

<sup>90</sup> Ibid.

Schedule 5 at 2.2(d) requires Industry Programmes, Catchment Collectives and Farm Management Plans to address wetland management to meet the outcomes specified in Policies 12 and 13.

The environmental benefits of wetlands and enhancing and expanding them is set out in Policy 12 including their value for: biodiversity and as a habitat for indigenous flora and fauna species; their role in the hydrological cycle, including their effects on both high and low flows, enhancement of water quality in connected water bodies; and fisheries habitat. Note also the benefits as set out in RPS Objective LW1, 1A in section 8.4.2.3 above, including the footnote to that provision.

In addition to the cultural benefits of increased taonga raranga availability, enhanced and increased wetlands would also improve general tikanga Māori and mahinga kai values.

management provisions are likely to be effective in achieving the abovementioned objectives.

**Efficiency**

There will be a public cost involved borne by the ratepayer in the proposed non-regulatory wetland enhancement initiatives. As set out in the benefits column there are significant environmental, social and cultural benefits to be gained from enhanced wetland management in justifying such cost.

**Appropriateness**

Having regard to efficiency and effectiveness the proposed direct the proposed non-regulatory methods for wetland management, are therefore considered appropriate in meeting the above mentioned objectives.

#### 8.4.6 Risk of Acting or Not Acting

An RMA section 32 evaluation report must contain an assessment of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions (under section 32(2)(c) the RMA). The reason for adopting the land drainage and wetland management provisions in Change 9 is due to the tangible environmental, social and cultural benefits that can be achieved from overall improvements in freshwater quality that improved drainage water quality would result in and from the enhancement of wetlands.

Not acting at all is not an option due to the need for Change 9 to give effect to the higher order resource management instruments including the Regional Policy Statement (Change 5) and the NPSFM which require improvements in water quality from the status quo.

As such there is little risk of acting in the manner proposed which will ensure improvements in the water quality of the TANK catchments over time.

#### 8.4.7 Conclusion

This above assessment demonstrates that the proposed provisions, relating to land drainage and wetland management, are the most appropriate for achieving the objectives of Change 9.



## 8.5 DAMMING, STORAGE AND HIGH FLOW TAKES

### 8.5.1 Introduction

The provisions assessed in this category include the TANK 11, 12, 13 & 14 rules, Schedule 7 and Policies 51 - 57.

These are the provisions that regulate high flow water takes and the damming and storage of water and the subsequent use of such water within the TANK catchments.

Rules 11 – 13 provide for as a discretionary activity the taking of surface water at high flows; damming of surface water and discharges from dams; and the take and use of water from a dam or water impoundment. That is except for any dam on the main stem of the Ngaruroro, Taruarau, Omahaki, Tūtaekurī, Mangone and Mangatutu Rivers which TANK 14 would make a prohibited activity. It is however important to note that it is only the construction of a dam within these rivers that is prohibited by TANK 14. Abstraction from these rivers and out of stream storage in a reservoir would not be prohibited by this rule.

The relevant policies for this group of provisions are headed as follows:

- Policy 51 Adverse Effects – Water Damming
- Policy 52 Adverse Effects – Water Take and Storage
- Policy 53 Benefits of Water Storage and Augmentation
- Policy 54 Further Investigation of Water Storage and Augmentation
- Policy 55 Prohibition of Dams on Ngaruroro and Tūtaekurī Rivers and specified tributaries
- Policy 56 Allocation of 20% of High Flow in the Ngaruroro and Tūtaekurī catchments for Māori organisations
- Policy 57 Matters for Resource Consent Applications for High Flow takes

Schedule 7 High Flow Allocation sets out the flow triggers for high flow allocations in the Ngaruroro and Tūtaekurī catchments, including the amount of flow reserved for Māori Development.

### 8.5.2 Statutory Context

#### 8.5.2.1 Resource Management Act 1991 (RMA)

The Damming, Storage and High Flow Take provisions of Change 9 seek to enable the storage of water from high flow takes. The subsequent use of this water would provide for the farmer and grower communities to provide for their economic well-being. Policies 51, 52 and 57 and the associated rules seek to ensure that the environmental protection clauses of RMA section 5(2)(a)-(c) are met.



The prohibition of dams on the Ngaruroro and Tūtaekurī Rivers and specified tributaries under Policy 55 and Rule TANK 14 recognises and provides for the following matters of national importance:

*(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*

*(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*

*(e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga*

The Damming, Storage and High Flow Take provisions of Change 9 also seek to have regard to sections 7 (a) kaitiakitanga; (b) the efficient use and development of natural and physical resources; (c) the maintenance and enhancement of amenity values; (d) intrinsic values of ecosystems; (g) any finite characteristics of natural and physical resources; (f) maintenance and enhancement of the quality of the environment; (h) the protection of habitat of trout and salmon; and (j) the benefits to be derived from the use and development of renewable energy. Clearly, Policy 55 and Rule TANK 14 will not enable benefits to be derived from the damming of the Ngaruroro and Tūtaekurī Rivers or specified tributaries to develop the renewable energy of hydro electric power generation. This policy and rule would not however prevent the use of water for such purposes where water is abstracted to offline storage dams during high flows, or the damming of tributaries not specified in Rule TANK 14.

Specific provision for setting aside a proportion of the high flow take for Māori organisations under policy 56 and Schedule 7 has regard to section 8 of the RMA in taking into account the principles of the Treaty of Waitangi.

The Council has a number of functions under section 30(1) of the RMA that are relevant to the Damming, Storage and High Flow Take provisions of Change 9. They include:

- Establishing, implementing and reviewing objectives, policies and methods to achieve integrated management of the natural and physical resources of the region (section 30(1)(a)).
- Preparing objectives and policies in relation to any actual or potential effects of the use, development or protection of land which are of regional significance (section 30(1)(b)).
- The control of the use of land for the purpose of (section 30(1)(c)):
  - the maintenance and enhancement of the quality of water in water bodies (ii), and
  - the maintenance of the quantity of water in water bodies and coastal water (iii):



- the maintenance and enhancement of ecosystems in water bodies and coastal water (iia);
- The control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any water body, including (section 30(1)(e)):
  - (i) the setting of any maximum or minimum flows of water:...
- If appropriate, the establishment of rules in a regional plan to allocate any of the following (section 30(1)(fa)):
  - (i) the taking or use of water (other than open coastal water):
  - (ii) the taking or use of heat or energy from water (other than open coastal water):...

#### 8.5.2.2 National Policy Statement for Freshwater Management 2014 (NPSFM)

The NPSFM (as summarised in section 3.4.1 of this report above) requires values and attributes to be assigned to Freshwater Management Units (FMUs) by engagement with the community including tangata whenua. The NPSFM includes two compulsory values, ('ecosystem health' and 'human health for recreation') and a list of optional 'other national values' that may be assigned to FMUs, including:

- *Natural form and character;*
- *Mahinga kai*
- *Fishing*
- *Irrigation, cultivation and food production*
- *Animal drinking water*
- *Wai tapu*
- *Water supply*
- *Commercial and Industrial use*
- *Hydro-electric power generation*
- *Transport and tauranga waka*

These values can all be relevant to the Damming, Storage and High Flow Take provisions of Change 9 and the effects of such uses.

Objective AA1 of the NPSFM is to consider and recognise Te Mana o te Wai in the management of fresh water

Objective A1 of the NPSFM reflects the above-mentioned compulsory values in requiring the safeguarding of the life supporting capacity of freshwater and the health and safety of communities as affected by contact with fresh water in sustainably managing the use of land and discharge of contaminants.



Objective A2 of the NPSFM requires the overall quality of fresh water within the TANK catchments to be maintained or improved. In many locations within the TANK catchments water quality is below the objective levels set in Schedule 1 of Change 9.

Objective B1 of the NPSFM requires the safeguarding of the life-supporting capacity, ecosystem processes and indigenous species in sustainably managing the taking, using, damming, or diverting of fresh water.

Objective B3 is to improve and maximise the efficient allocation and efficient use of water.

These objectives will be given effect to by the Damming, Storage and High Flow Take provisions of Change 9 which generally seek to enable storage and high flow takes and damming of some rivers, provided any adverse effects on water quality and quantity can be avoided, remedied or mitigated.

Objective B4 is to protect significant values of wetlands and of outstanding freshwater bodies. Although the outstanding freshwater body plan change is still to be completed, indications are that the main stems of Ngaruroro and Tūtaekuri are likely to be identified as outstanding. Significant evidence was presented to the Ngaruroro Water Conservation Order Board of inquiry process to this effect. On this basis the prohibition of dams on the main stems of the Ngaruroro and Tūtaekuri Rivers and their significant tributaries by Policy 55 and Rule TANK 14 will give effect to this objective.

Objective B5 is to enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing fresh water quantity, within limits. This objective is given effect to by provisions enabling the storage of freshwater when allocations are available. The stored water would then be available for productive economic uses.

Policy B4 is: By ever regional council identifying methods in regional plans to encourage the efficient use of water. Policies 53 and 54 recognise the benefits of water storage and augmentation schemes which would seek to provide for efficient use by taking and storing water when a surplus is available during times of high flows.

Objective D1 and Policy D1 require regional councils to ensure that tangata whenua values and interests are identified and reflected in the management of fresh water. This is directly given effect to by policies 56 and 57 and Schedule 7 in ensuring that a proportion of high flow takes is set aside for use of Māori organisations; marae and papakainga; and the development of land returned through Treaty Settlements.

#### **8.5.2.3 National Environmental Standard for Renewable Electricity Generation 2011**

The National Policy Statement for Renewable Electricity Generation 2011 (NPSREG) has a single objective stated as follows:



*"To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation."*

The policies of the NPSREG ensure renewable electricity generation, regardless of scale and type, is recognised for its contribution to the well-being of New Zealand.

The relevant policies of the NPSREG to regional plans and how these have been given effect to by RPS Change 5 is set out in section 3.4.2 of this report above. Hydro electricity generation has not been identified as a primary or secondary value in Table 1 of the RPS for the TANK catchments but has been identified as a value for other catchments.

Despite hydroelectricity generation not being identified as a value within the TANK catchments, Policy 53, under the heading 'Benefits of Water Storage and Augmentation' does provide for renewable electricity generation to be considered in regard to water storage and augmentation schemes as follows:

*The Council will also 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:*

*h) whether the proposal provides for renewable electricity generation*

Clearly Policy 55 and Rule TANK 14 do not provide for dams on the specified rivers to enable renewable hydro electricity generation, however these provisions prioritise other statutory provisions and freshwater values which would be adversely effected by the establishment of dams on the mainstems of the specified rivers. This policy and rule does not prevent the ability to divert water from those rivers to 'off line' storage impoundments, which in accordance with Policy 53, could provide for renewable electricity generation.

#### **8.5.2.4 Regional Policy Statement (RPS)**

Objective LW1 requires that *"Freshwater and the effects of land use and development are managed in an integrated and sustainable manner..."* The subclauses of Objective LW1 include the following matters that are relevant to the proposed TANK damming, storage and water take provisions:

- *1. Protecting the quality of outstanding freshwater bodies in Hawke's Bay;*
- *3. Recognising that land uses, freshwater quality and surface water flows can impact on aquifer recharge and the coastal environment within the Hawke's Bay region and the improvement of water quality in water bodies that have been degraded to the point that they are over allocated;*



- 4. Safeguarding the life supporting capacity and ecosystem processes of freshwater, including indigenous species and their associated freshwater ecosystems;
- 7. Recognising the potential national, regional and local benefits arising from the use of water for renewable electricity generation;
- 9. Ensuring efficient allocation and use of water;
- 13. Recognising and providing for the recreational and conservation values of fresh water bodies; and
- 14. Promoting the preservation of the natural character of... rivers, and their protection from inappropriate subdivision, use and development.

Objective LW2 'Integrated management of freshwater and land use development' relates to balancing the multiple and competing values within catchments. It requires regional plans to provide clear priorities for the protection and use of those freshwater resources where significant conflict and competing values exist. There is conflict between the matters listed above within Objective LW1 for the damming and storage provisions. Change 9 has given effect to Objective LW2 by providing a clear direction that there will be no damming of the main stems of the Ngaruroro and Tūtaekurī Rivers and specified tributaries to them. This therefore prioritises Objective LW1 matters 1, 4, 13 and 14 over 7. Matter 7 is still however provided for in Change 9 where any hydro-electricity generation is provided by off line water storage facilities or dams on rivers other than those specified in Policy 55 and Rule 14.

Policy LW1 seeks to implement the above objectives through 'catchment based integrated management'. Of relevance to the damming storage and high flow take provisions, clause (f) of this policy requires the adoption of an approach for each catchment area that:

- 1.b) provides for mātauranga a hapū and local tikanga values and uses of the catchment;
- 1.c) provides for the inter-connected nature of natural resources within the catchment area, including the coastal environment;
- 1.cA) recognises and provides for the need to protect the integrity of aquifer recharge systems;
- 1.d) gives effect to provisions relating to outstanding freshwater bodies...;
- 1.iD) provides opportunities for new renewable energy electricity generation infrastructure where the adverse effects on the environment can be appropriately managed;
- 1.j) ensures efficient allocation and use of freshwater within limits to achieve freshwater objectives; and
- 1.k) enables water storage infrastructure where it can provide increased water availability and security for water users while avoiding, remedying or mitigating adverse effects on freshwater values.



The damming, storage and high flow take provisions in Change 9 seeks to achieve all of the above in the integrated management of the TANK catchments. In doing so the TANK Working Group concluded that in regard to item 1.iD above that renewable energy electricity generation infrastructure in the form of dams on the main stems of the Ngaruroro and Tūtaekurī Rivers and their specified tributaries would create effects on the environment that could not be appropriately managed.

Clause 3 of Policy LW1 states that when setting objectives ensure:

- a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water are safeguarded; and*
- b) adverse effects on water quantity and water quality that diminish mauri are avoided, remedied or mitigated; and...*

The damming, storage and high flow take provisions in Change 9 will help achieve RPS policy LW1(3).

Policy LW2 includes:

- ...1. Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3: a) Greater Heretaunga / Ahuriri Catchment Area;...*
- 3. When managing the freshwater bodies...: a) recognise and provide for the primary values and uses identified in Table 1; and b) have particular regard to the secondary values and uses identified in Table 1;...*

The primary values for the TANK catchments, which in Table 1 are referred to as the Greater Heretaunga / Ahuriri Catchment Area, include values that could be adversely effected or enhanced by the damming, storage and high flow take provisions of Change 9, these being:

- *Any regionally significant native water bird populations and their habitats*
- *Cultural values and uses for: mahinga kai, nohoanga, taonga raranga and taonga rongoa*
- *Fish passage*
- *Native fish habitat in the Ngaruroro River and Tutaekuri River catchments*
- *Recreational trout angling and trout habitat in:*
  - *The Mangaone River*
  - *The Mangatutu Stream*
  - *The Ngaruroro River and tributaries upstream of the Whanawhana cableway*
  - *The Ngaruroro River mainstem between the Whanawhana cableway and confluence with the Maraekakaho River*
  - *The Tūtaekurī River mainstem above the Mangaone River confluence*



- *The high natural character values of the Ngaruroro River and its margins upstream of Whanawhana cableway including, Taruarau River*
- *The high natural character values of the Tūtaekuri River and its margins above the confluence of and including, the Mangatutu Stream*
- *Trout spawning habitat*
- *Freshwater use for beverages, food and fibre production and processing and other land based primary production.*

The following amendments resulting from Change 5 to other RRMP objectives and policies are also relevant to the damming, storage and high flow take provisions of Change 9:

*OBJ 25 The quantity of water in wetlands, rivers and lakes is suitable for sustaining aquatic ecosystems, for achieving other freshwater objectives, and ensuring resource availability for a variety of purposes across the region, while recognising the impact caused by climatic fluctuations in Hawke's Bay.*

### 8.5.3 Relevant Objectives of Change 9

Given the statutory context provided above, the relevant objectives to these provisions cover the following issues: water quantity; damming and diverting water; providing for the values of mauri and ecosystem health and natural character; aquatic habitat protection; high flow allocation; and harvesting and storage. Therefore, the evaluation of the appropriateness of the provisions should be against the following relevant Change 9 objectives: 1, 3, 5, 6, 7, 8, 10, 13, 14, 15 and 16 (see section 7.2 above). Specific portions of five of these objectives are the most specific objective to the Damming, Storage and High Flow Water Take provisions and for convenience are quoted as follows:

**Objective 6** *In combination with meeting the water quality states specified in Schedule 1, 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 Whanawhana 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 cultural practices of Uu and boating, including jet-boating in the braided reaches of the Ngaruroro;*

*d) protection of the natural character, instream values and hydrological functioning of the Ngaruroro mainstem and, 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; ...

**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 **Tūtaekurī 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 cultural practices of Uu and boating;
- d) protection of the natural character, instream values and hydrological functioning of the Tūtaekurī 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;
- ...

**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 water allocation in the following priority order:

- a) Water for the essential needs of people;
- b) The allocation and reservation of water for domestic supply including for marae and papakainga, and for municipal supply so that existing and future demand as described in HPUDS (2017) can be met within the specified limits;
- c) primary production on versatile soils;
- d) other primary production food processing, industrial and commercial end uses;
- e) other non-commercial end uses so that;
- f) The development of Māori economic, cultural and social well-being is supported through the regulating the use and allocation of the water available at high flows for taking, storage and use;
- g) Water is available for abstraction at agreed reliability of supply standards;
- h) Water use is efficient;
- i) 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 efficiency, and innovations in technology and management;
- b) flexible water allocation and management regimes;
- c) water reticulation;
- d) aquifer recharge and flow enhancement
- e) water harvesting and storage

**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).

#### 8.5.4 Overview of Practicable Options

The status quo regulation applying to damming storage and high flow takes is summarised in Table 35 below compared to the proposed equivalent provisions in Change 9.

**Table 35 – Comparison of Current and Proposed Damming, Storage and High Flow Water Take Provisions**

Activity	Existing RRMP	Proposed Change 9
Diversion of Water for Storage	<p>The following rules apply generally across the region.</p> <p>Rule 56 Minor Diversions. Permitted Activity if conditions complied with including the catchment above diversion not exceeding 50ha and the</p>	<p>Rule TANK 11 – The taking of surface water at times of high flow for storage in an impoundment – Discretionary Activity.</p>



	<p>volume diverted shall not exceed 10% of the flow with the diverted water returning not more than 100m downstream from the point of diversion.</p> <p>Rule 59 Diversions which cannot comply with rule 56 – Discretionary Activity</p>	<p>Rule TANK 13A makes high flow takes a Non-Complying Activity where the conditions of TANK 11 / provisions of Schedule 7 are not met.</p> <p>Schedule 7 – Specifies triggers for when high flows are deemed to apply on the Ngaruroro River, Tūtaekuri River and the tributaries of those rivers.</p>
Damming	<p>The following rules apply generally across the region.</p> <p>Rule 67 Dams &amp; other structures in rivers, lakes etc. Permitted Activity if conditions complied with including the catchment not exceeding 50ha and the volume stored not exceeding 20,000m<sup>3</sup>.</p> <p>Rule 68 Existing damming – Controlled Activity if water does not encroach onto any other property.</p> <p>Rule 69 dams not complying with rules 67 &amp; 68 – Discretionary Activity</p>	<p>Rule TANK 12 Damming of surface waters and discharge from dams except as prohibited by TANK 14 – Discretionary Activity.</p> <p>Rule TANK 13A makes damming a Non-Complying Activity where the conditions of TANK 12 are not met.</p> <p>Rule TANK 14 Dams within the mainstem of the following rivers: Ngaruroro River and its following tributaries: Taruarau River &amp; Omahaki River. Tūtaekuri River and its following tributaries: Mangaone River &amp; Mangatutu River. – Prohibited Activity.</p>
Take and use from Storage	<p>The following rules apply generally across the region.</p> <p>Rule 54 Minor takes and uses of surface water Permitted Activity if conditions complied with including the total volume taken shall not exceed 20m<sup>3</sup>/d per property and the intake shall not exceed 0.3m/s. Takes are excluded from water short catchments identified in Schedule Via including from the TANK Catchments: the Maraekakaho Stream, Ahuriri Estuary catchment, and the following tributaries of the Karamu: Awanui Stream, Louisa Stream, Herehere Stream,</p>	<p>Rule TANK 13 Take and use from a dam or water Impoundment. – Discretionary Activity.</p> <p>Rule TANK 13A makes the take and use from a dam or water Impoundment a Non-Complying Activity where the conditions of TANK 13 are not met.</p>



Mangaroa Stream, School Stream, Karituwhenua Stream, Te Waikaha Stream.

Rule 55 Take and use of surface water including takes associated with irrigation schemes – Discretionary Activity

A difference with the proposed Change 9 rules is that they are specific to the TANK catchment and more specific to particular activities than the existing RRMP status quo rules.

#### Diversion of Water for Storage High Flow Takes

As can be seen in Table 35 there is no equivalent RRMP rule to the proposed TANK 11 high flow take rule. There is however a general rule applying to diversions with any significant diversion to a water storage impoundment having discretionary activity status under Rule 59 of the RRMP. Takes under TANK 11 would also have discretionary activity status however, takes that did not comply with the high flow triggers in Schedule 7 would be a Non-Complying Activity under TANK 10. In addition, TANK 11 is supported by specific policies 52 – 54 which are generally supportive of high flow takes for water storage and augmentation.

The enabling approach to water storage and augmentation in Policies 53 & 54 (as listed in Table 36 below) is linked to the TANK water take provisions in being significantly more restrictive than the status quo RRMP rules. The TANK provisions reduce water allocations from the status quo as is discussed further below in the section on Water Takes.

A key component of the High Flow Take provisions, for which different options have been assessed, is the setting of the Flow Triggers and High Flow Allocations through Schedule 7.

A discussion document was prepared for TANK meeting 38 to assess the reasonably practicable options in setting High Flow Allocations. This report is titled '*Discussion Document and Options; Part 2 High Flow Allocation Regime; Policy and Rules*', HBRC, 22 March 2018 (the 'High Flow Regime Report'). That report was prepared in consultation with TANK's Water Augmentation Group.

The status quo high flow trigger of 20m<sup>3</sup>/s at Fernhill was considered appropriate to remain by the High Flow Regime Report. Detailed consideration was however given to different high flow allocations, with 2m<sup>3</sup>/s, 6m<sup>3</sup>/s and 8m<sup>3</sup>/s all being assessed as options. The High Flow Regime Report considered advice from a 2010 Tonkin and Taylor Report '*Ngaruroro water augmentation scheme prefeasibility study – Stage 1 Report*' that potential new irrigation of the Heretaunga Plains and Ngaruroro river flats may be up to



3,500ha and this demand could be met with 17.5 million cubic metres of storage, but that the current 2m<sup>3</sup>/s high flow allocation would be insufficient to meet this demand<sup>91</sup>.

Other reasons for advancing storage proposals include for the creation of aquatic habitat, flow enhancement, increasing reliability of water supply or meeting demand such as for urban development.<sup>92</sup>

The High Flow Regime Report identified that to avoid adverse effects on in-stream values (eg aquatic ecology), it is important to ensure that the high flow allocation will not compromise flushing flows that remove periphyton and maintain macroinvertebrate structure. It also identified 'FRE<sub>3</sub>' as a key metric for assessment, being the number of times per year when river flows exceeds three times the median flow.<sup>93</sup> This metric has been used throughout New Zealand for determining high flows. The MWH 2010 report 'Ngaruroro River high flow allocation: June to November period' considered that in terms of limiting impact to the aquatic environment, a high flow allocation is acceptable if FRE<sub>3</sub> under the altered flow regime would be changed by less than 10% when compared to FRE<sub>3</sub> for naturalised flows.<sup>94</sup>

Based on ensuring that there is less than a 10% change in FRE<sub>3</sub>, while also seeking an allocation that may be sufficient to meet irrigation demand for 3,500ha with 17.5Mm<sup>3</sup> of storage, the High Flow Regime Report assessed the options for high flow allocations being set at 4m<sup>3</sup>/s, 6m<sup>3</sup>/s and 8m<sup>3</sup>/s.

Based on modelling, the High Flow Regime Report concluded that there is less than 10% change in FRE<sub>3</sub> for all high flow allocation scenarios up to 8m<sup>3</sup>/s.<sup>95</sup> In regard to providing for a sufficient quantity of high flow allocation to fulling a 17.5Mm<sup>3</sup> reservoir that Report concluded:

*In summary, a total high flow allocation of 6 m<sup>3</sup>/s (including 4 m<sup>3</sup>/s for future demand) may be sufficient to provide new irrigation to 3,500 ha in most years. However, there is greater certainty (given the assumptions listed above) of a total high flow allocation of 8 m<sup>3</sup>/s (including 6 m<sup>3</sup>/s for future demand) providing for future demand to irrigate 3,500 ha. Moreover, a total high flow allocation of 8 m<sup>3</sup>/s is the most likely scenario to provide additional volume to store water for environmental purposes, such as augmentation during low flow periods.*

Based on this, a high flow allocation of 8 m<sup>3</sup>/s has been adopted in Schedule 7 of Change 9.

<sup>91</sup> Page 9 of High Flow Regime Report.

<sup>92</sup> Ibid

<sup>93</sup> Ibid Page 9.

<sup>94</sup> Ibid Page 10.

<sup>95</sup> Ibid Page 12



### Damming

Table 35 illustrates that any significant dam would have discretionary activity status under both the status quo RRMP and rule TANK 12, that is except for the specific prohibition of damming of the mainstems of rivers specified in rule TANK 14.

Other practicable options would include the status quo of not differentiating those rivers specified in TANK 14 or making a dam on those rivers a non-complying activity and therefore subject to a higher resource consent test than dams on other rivers or specifying less or additional rivers in TANK 14.

The HBRC covering report to TANK Meeting 41 set out the options of the status quo discretionary activity status for applications to dam a river to be considered on its merits, or for a non-complying activity status for the specified rivers to be subject to a higher test if an application were to be made for a dam. After considering these options the TANK Group opted for a prohibited activity status in rule TANK 14 preventing dams on the specified rivers reflecting the significance of the instream uses and values of those rivers which would be lost if a dam were to be constructed. These values and uses include natural character and landscape, habitat for indigenous species and recreational activities including angling and rafting, as well as strong hapū connections and whakapapa to these rivers. The specified rivers in rule TANK 14 are identified on the map in Figure 5 below.



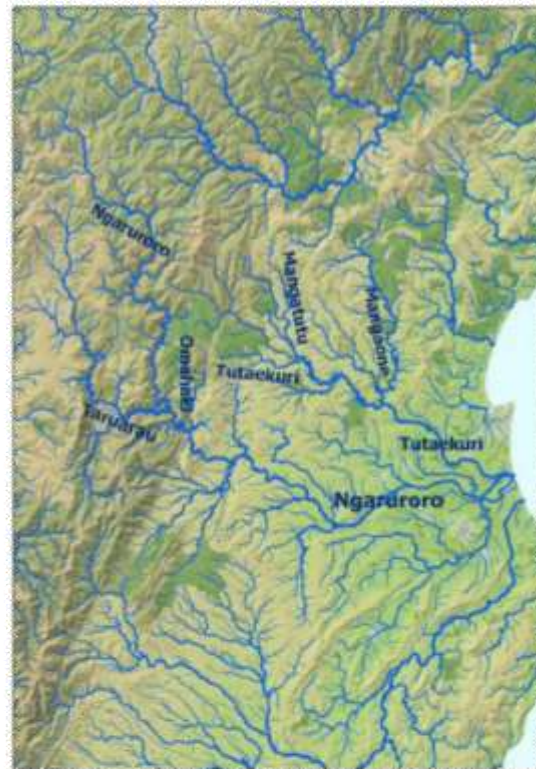


Figure 5 –Location of Named Rivers in Rule TANK 14 Prohibiting Dams<sup>96</sup>

Table 36 – Values and Information Identified for the Named Rivers in Rule TANK 14

River and Values as Attributed by the TANK Meeting 41 Covering Report	Values <sup>97</sup> specifically attributed to River in RPS Change 5, Table 1 (Policy LW2)	Other Information as specified in the TANK Meeting 41 Covering Report
<b>Ngaruroro River</b>	Native fish habitat in the Ngaruroro River ...	Extensive information provided as part of the WCO about the significance of the
High natural character	Recreational trout angling and trout habitat in the Ngaruroro River mainstem upstream of the	› indigenous species incl fish,
Native fish habitat		› bird habitat

<sup>96</sup> TANK Meeting 41 Covering Report, HBRC (2018) (Attachment 2)

<sup>97</sup> Primary values unless specified as secondary.



Recreational trout fishing and trout habitat	confluence with the Maraekakaho River	<ul style="list-style-type: none"> <li>➤ natural character and scenic values</li> <li>➤ trout fishery.</li> <li>➤ recreational uses (angling rafting)</li> <li>➤ tikanga Māori values</li> </ul>
	The high natural character values of the Ngaruroro River and its margins upstream of Whanawhana cableway	
	Secondary Values:	
	• Aggregate supply and extraction in Ngaruroro River downstream of the confluence with the Mangatahi Stream	
	Amenity for contact recreation (including swimming) in lower Ngaruroro River...	
<b>Taruarau River</b>	Native fish habitat in the Ngaruroro River ... catchments	Upper Ngaruroro Tributary
Recreational trout angling and trout habitat	Recreational trout angling and trout habitat in the Ngaruroro River and tributaries upstream of Whanawhana cableway	The Taruarau basin is dominated by regenerating shrub cover. Some exotic production forests exist on Crown land under forest lease east of Kuripapango, and there is an area of private farmland in the lower Taruarau catchment.
High natural character	The high natural character values of the Ngaruroro River and its margins upstream of Whanawhana cableway, including Taruarau River	Whitewater rafting is also an activity carried out on this river
		There is a large intact wetland complex of the upper Taruarau catchment – Ngamatea East Swamp
<b>Omahaki River</b>	Native fish habitat in the Ngaruroro River ... catchments	It is known to be one of several tributaries that are sources of recruitment for the rainbow trout population in the lower Ngaruroro River. ... <sup>98</sup>
(Not specifically mentioned in the RPS)	Recreational trout angling and trout habitat in the Ngaruroro River and tributaries upstream of Whanawhana cableway	The total area of the Omahaki catchment is 7400 ha, around 4% of the Ngaruroro catchment. Sheep/beef

<sup>98</sup> In providing this information on the Omahaki River the TANK Meeting 41 Covering Report raised the following question: Is there any information to suggest that the river is of such noteworthy or additional value that a prohibition on damming is necessary to protect them? By including the Omahaki in Rule 14 the TANK Group decided that the river was of sufficient value.



and Manuka/kanuka shrubland dominate the catchment with respective areas of 2400 ha (32%) and 2600 ha (34). Most of the remainder of the catchment is covered by exotic forest with an area of about 2000 ha or 27% of the Omahaki catchment. The total modelled annual sediment load of the Ngaruroro River is 704 000 tonnes, with the Omahaki catchment contributing 21 000 tonnes/year or 3% of the total sediment load.

<b>Tutaekuri River</b>	Native fish habitat in the ... Tutaekuri River ...	The Tūtaekuri River rises in the Kaweka Ranges, around 50 kilometres northeast of Taihape. It is approximately 100 kilometres long and flows over there Heretaunga Plains where it now joins the Ngaruroro River and flows out to sea through the Waitangi Estuary. <sup>99</sup>
High natural character values	Recreational trout angling and trout habitat in the Tutaekuri River mainstem above the Mangaone River confluence	No additional information was listed in the TANK 41 Cover report.
Native fish habitat	The high natural character values of the Tutaekuri River and its margins above the confluence of, and including, the Mangatutu Stream	The values listed for this river in the Draft of Plan Change 7 – Outstanding Water Bodies are:
Recreational trout fishing and trout habitat (above the Mangaone confluence)	Secondary Values:  • Amenity for contact recreation (including swimming) in ... Tutaekuri River...	Cultural, spiritual, macroinvertebrates.
<b>Mangaone River</b>	Native fish habitat in the ... Tutaekuri River catchments	These two Tutaekuri tributaries together are more than 55% of the Tutaekuri catchment area.
Recreational trout angling and trout habitat	Recreational trout angling and trout habitat in the Mangaone River	The total area of the Mangaone and Mangatutu catchments are 34 000 and 12 000 ha respectively, and collectively make up a large proportion of the hill-country in the Tutaekuri Catchment. Sheep/beef is the dominant land use, covering 47% (16 000 ha) of Mangaone catchment
<b>Mangatutu River</b>	Native fish habitat in the ... Tutaekuri River catchments	

<sup>99</sup> Tūtaekuri River Cultural Values Assessment for Outstanding Waterbodies Plan Change, HBRC 2018



Recreational trout angling and trout habitat	Recreational trout angling and trout habitat in the Mangaone Stream	and 40% (4800 ha) of the Mangatutu Catchment. Dairy covers 10 and 12 % of the land area in the Mangaone and Mangatutu catchments respectively; exotic forestry, 19 and 13%; and Manuka/Kanuka, 6 and 21%.
High natural character	The high natural character values of the Tutaekuri River and its margins above the confluence of, and including, the Mangatutu Stream	Indigenous forest is less than 10% of the land area in both catchments. Hill-country erosion is a major issue in the two catchments with modelled annual losses of 172 000 tonnes in the Mangaone Catchment and 51 000 tonnes in the Mangatutu Catchment. Collectively, the two catchments contribute about 60% of the total sediment load of the Tutaekuri catchment.

In proposing to prohibit dams on the rivers listed in Rule 14 (and the above table), the TANK Meeting 41 Cover Report notes:

*However, for some rivers some of the values that can be provided for must be considered as alternatives – it is either impossible to provide for both at the same time, or one value is much more favoured. For example for a river that has potential for a dam to provide water for abstraction or flow enhancement at low flows, the plan cannot also provide the same or similar ongoing level of protection for say, natural character or white water rafting.*

*The TANK Group approach to decision making for the tributaries listed above reflects a values based approach to the management of these rivers where the preferred values are instream and specifically natural flow regimes and natural character. Note that abstraction and out of stream storage in a reservoir would not be prohibited by this damming prohibition.*

#### Take and Use of Water from Storage

As illustrated in Table 35, any take of water (other than minor takes) from a dam or storage impoundment would be a discretionary activity under both the existing RRMP and TANK Change 9. The difference is in the specific policy direction provided in proposed change 9. Policies 53 and 54 are supportive of both high flow takes and the uses of such water.

The alternative option would be not to have any supporting policies, which would make the resource consent pathway more difficult for justify the storage of water and the use of that water.



An option was considered of including additional policies and provisions within Schedule 7 to allocate a minimum of 20% of high flow takes from the Ngaruroro River and Tūtaekuri Rivers to be available for specific uses of benefit to Māori organisations. This approach was not however supported in the draft plan change consultation with tangata whenua groups and was therefore removed from the Plan Change.

#### Policies for Damming, Storage and High Flow Takes

Table 37 sets out how these approaches for managing Damming, Storage and High Flow Takes have been implemented as regional plan provisions in the form of policies within Change 9 (Rules 11 – 14 are not included as these are listed in Table 35 above).

**Table 37– Damming, Storage and High Flow Water Take Policies in Change 9**

Ref	Provision / Provision Summary
Policy 51.	<p>When assessing applications to dam water and to take water from the dam impoundment, the Council will avoid, remedy or mitigate adverse effects of;</p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>(i) the uses and values for any water body identified in the objectives or in RPS Table 1 ;</li> <li>(ii) water levels and flows in connected water bodies, including lakes and wetlands</li> <li>(iii) water quality, including effects on temperature and management of periphyton in connected water bodies;</li> <li>(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;</li> <li>(v) groundwater recharge;</li> <li>(vi) downstream land, property and infrastructure at risk from failure of the proposed dam;</li> <li>(vii) other water users;</li> <li>(viii) downstream river bed stability, including through sediment transfer and management of vegetation in river beds</li> </ul> <p>c) whether there are practicable alternatives</p> <p>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 adversely affect the frequency of flows above three times the median flow 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.</p>
Policy 52.	<p>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;</p>



- 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 the objectives or 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 adversely affect the frequency of flows above three times the median flow 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.

Policy 53.	<p>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:</p> <ul style="list-style-type: none"> <li>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</li> <li>b) whether water availability is improved or the level to which the security of supply for water users is enhanced</li> <li>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</li> <li>d) whether the proposal provides benefits to downstream water bodies at times of low flows provided through releases from storage or the dam.</li> <li>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.</li> <li>f) benefits for other water users including recreational and cultural uses and any public health benefits.</li> <li>g) other community benefits including improving community resilience to climate change</li> <li>h) whether the proposal provides for renewable electricity generation</li> </ul>
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Policy 54.	<p>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,</p>
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tangata whenua, industry groups, resource users and the wider community when making decisions about water augmentation proposals in its Annual and Long Term Plans.

Policy 55.	The Council will protect the instream water values and uses identified in the objectives and in RPS Table 1 for the Ngaruroro and Tūtaekuri Rivers and the tributaries, Taruarau, Omahaki, Mangatutu and Mangaone Rivers by prohibiting the construction of dams on the mainstem of those rivers.
Policy 56.	<p>The Council will allocate 20% of the total water available at times of high flow in the Ngaruroro or Tūtaekuri River catchments for abstraction, storage and use for the following activities;</p> <p>a) The use of water for any activity that results in a direct (funding) contribution to Māori organisations at a financially equivalent rate that is proportional to the amount of water being taken for that activity;</p> <p>(i) improvement of access to water for domestic marae and papakainga;</p> <p>(ii) contribution to environmental enhancement (that is in addition to any conditions imposed on the water storage proposal);</p> <p>(iii) 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.</p> <p>And in making decisions on resource applications for this water the Council will;</p> <p>(iv) require information to be provided that demonstrates how these activities will be provided for;</p> <p>(v) 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 to activities that contribute to Māori well-being;</p> <p>(vi) 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.</p>
Policy 57.	<p>When making decisions about resource consent applications to take high flow water, the Council will take into account the following matters:</p> <p>a) whether water allocated for development of Māori well-being is still available for allocation;</p> <p>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.</p> <p>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;</p> <p>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;</p> <p>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;</p> <p>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.</p>



8.5.5 Assessment of the Appropriateness of the Provisions

The assessment of the changes to the policies, rules and other methods under sections 32(1)(b) and (2)(a) of the Act, is provided in Table 38 below. The new policies, amended and new RRMP rules and other methods (Schedule 5 ) included in this plan change are set out under Tables 37 and 35 above and assessed for their appropriateness in achieving the objectives of the Plan Change below.

Table 38- Assessment of the Damming, Storage and High Flow Water Take Provisions under sections 32(1)(b)(ii) and (iii), 32(2) (a) and (b) and 32(3) of the Act

Theme, Provisions and Summary of Provisions	Assessment Under RMA Section 32(2)		Assessment under RMA Section 32(1)(b)
	Environmental, Economic, Social and Cultural Benefits	Environmental, Economic, Social and Cultural Costs	Having regard to the appropriateness of the provisions by assessing their efficiency and effectiveness in achieving the objectives
<p>Theme: Diversion of Water for Storage / High Flow Takes and the use of that water</p> <p>Provisions: Policies 52 – 54, 56 &amp; 57; Rules TANK 11, 13 and 13A, and Schedule 7.</p> <p>Summary of Provisions:</p> <p>Policies 52 – 54 as set out in Table 37 above relate to: matters to consider in assessing applications to take water for</p>	<p>The benefits of water storage from high flow takes are listed in policy 53 and include environmental, economic, social and cultural benefits as summarised below.</p> <p>Environmental</p> <p>Potential benefits for aquatic organisms and other values listed in RPS Table 1 in affected water bodies if the water take enables augmentation from storage water at times of low flows.</p>	<p>The matters to be considered in assessing water storage applications from high flow takes are listed in policy 52. These provide a guide to the potential environmental, economic, social and cultural costs which are summarised below.</p> <p>Environmental</p> <p>Potential adverse changes to water quality arising from subsequent changes and intensification of land use activities as</p>	<p>Objectives: 1, 3, 5, 6, 7, 8, 10, 13, 14, 15 and 16 identified in section 8.5.3 as being the most relevant to these provisions. For convenience the objectives are summarised as follows:</p> <p>Objective 1 relates to establishing the Objectives in Schedule 1 and requires the principles of te mana o te Wai and ki uta ki tai to be upheld; Objective 3 seeks to protect mauri and ecosystem health by the collective management of the attributes in Schedule 1;</p>

off-stream storage or to take and use water from the impoundment (Policy 52); recognition of beneficial effects to be considered in the assessment of water storage and augmentation schemes (Policy 53); and the Council further investigating regional water supply and demand and water storage options (Policy 54).

Rule TANK 11 makes the taking of surface water at times of high flow for storage in an impoundment a discretionary activity subject to conditions which cross reference to Schedule 7.

Rule TANK 13 makes the taking and use of water from a dam or water impoundment a discretionary activity if it exceeds 5m<sup>3</sup> per day per property. If the conditions of TANK 13 (relating to Schedule 7) cannot be met the activity becomes non-complying under TANK13A.

Rule 13A also applies to the taking of surface water at times of high flow for storage in an impoundment a non-

Potential ecosystem benefits from the design and management of the water storage structure, its margins and any associated wetlands.

Contribution to reducing carbon emissions if renewable electricity generation is enabled. The potential for environmental enhancement via Policy 54 from Council's further investigation of future regional water demand and supply including for abstractive water uses.

#### Economic

Improved security of supply for water users through water storage from high flow takes.

Improved productive potential of currently un-irrigated land, especially in relation to primary production on versatile land.

Potential for renewable electricity generation and the economic benefits of such an activity.

A proposed high flow allocation of 8m<sup>3</sup>/s (giving 6m<sup>3</sup>/s additional to the already allocated 2m<sup>3</sup>/s) from the Ngaruroro River provided for as a discretionary activity by Rule TANK 11 and Schedule 7 when such takes are available (under a 20m<sup>3</sup>/s cease take).

a result of water being allocated for take and use from the impoundment. In this regard however, the Production Land Use rules of Change 9 will apply, including TANK4 and TANK4a relating to changes in production land use activities.

The potential to adversely affect water levels and flows in connected water bodies, including lakes and wetlands. The management of periphyton in connected water bodies if high flow takes were to detrimentally effect flushing flows (however such effects have been sought to be mitigated in the setting of the high flow allocation in considering the FRE<sub>3</sub> of the respective rivers in Schedule 7). Potential adverse effects on river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat with water take structures.

#### Economic

Economic costs would include the construction and implementation costs associated with the consenting of, construction and implementation of high flow takes and impoundment structures. The estimated costs for the construction of off river dams or water storage impoundments had been estimated at \$5

Objectives 5, 6, 7 & 8 relate to any taking, using, damming and diverting of freshwater being carried out in a way that improves and maintains mauri, water quality and water quantity in the Ahuriri, Ngaruroro, Tūtaekuri and Karamu / Clive catchment, and in wetlands and lakes respectively. Objective 13 sets out the priority order for water quantity allocation; Objective 14 seeks that future water needs are secured through methods including aquifer recharge and flow enhancement and water harvesting and storage; Objective 15 requires Council, tangata whenua and urban and rural communities working together in a way that recognises the kaitiaki and guardianship roles that the each play in freshwater management; and Objective 16 seeks to take into account the effects of climate change in decision making including the increasing frequencies of water storage and opportunities to improve community resilience.

Collectively then these objectives provide opportunity for high flow allocation and water storage provided that such activities can be undertaken in a way that improves and maintains mauri, water quality and water quantity.

<p>complying activity where the conditions of TANK 11 cannot be met.</p> <p>Schedule 7 sets out high flow allocation limits and triggers for the Ngaruroro and Tūtaeekurī Rivers and their tributaries. That is the minimum water flow contained in the river to trigger a 'high flow take' and the maximum allocation or volume of water to be taken for a high flow take.</p>	<p>This will provide enough water to store 17.5Mm<sup>3</sup> and to irrigate an additional 3,500ha in most years. This would also provide additional volume for environmental purposes, such as augmentation during low flow periods.</p> <p><b>Quantifying Economic Benefits</b></p> <p>The Agfirst March 2018 Report models a 'summer dry' pastoral farm as achieving a gross farm income of \$777 per hectare and an 'intensive' pastoral farm (which access to irrigation would provide for), as having a gross farm income of \$1,624 per hectare.<sup>100</sup> This demonstrates the significant economic benefit that can be achieved from a more intensive form of mixed sheep and beef farming (with some cropping). Such benefits would be more significant where the combination of irrigation and the underlying land resource enables land use change to horticulture. For example, per hectare gross revenue from irrigated kiwifruit, pipfruit and</p>	<p>per cubic metre of storage. On this basis an impoundment providing 4.5 million cubic metres of water storage is estimated to have a capital cost of \$24.5M (including a 10% provision for land acquisition and consenting costs), while operating costs are estimated at \$90K per annum.<sup>103</sup></p> <p><b>Social and Cultural</b></p> <p>Potential effects on downstream land, property and infrastructure at risk from failure of the proposed storage structure. Potential effects on competing water users, including recreational and cultural uses.</p>	<p><b>Effectiveness</b></p> <p>Specific reference is given to 'water harvesting and storage' in objective 14 as one of the measures to meet the needs of future generations. Objective 16 in seeking the effects of climate change are considered, refers to opportunities to improve community resilience. Policies 53 and 54 are particularly effective in achieving these objectives by documenting the benefits of water storage and directing further investigation of such opportunities. Policy 52 and Rules 11 and 13 are also effective in enabling the opportunity for high flow water takes for water storage and for the use of such water, but also give effect to the water values focused objectives by ensuring that such proposals are assessed on their merits through the resource consent process. Schedule 7 provides additional effect to the water values objectives by limiting high flow takes to an allocation that still leaves enough water for sufficient flush flows to occur to maintain the ecosystem health of the river. Rule 13A provides the</p>
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<sup>100</sup> 'Part 2 of the TANK catchment Economic, Social and Ecological Impact Assessment: Water Management & Land Management Policy Options', Agfirst (March 2018) (Page 32).

<sup>103</sup> 'Mitigation of Stream Depletion Effects from Groundwater Takes; Feasibility Report and Discussion Document', HBRC Report for TANK Meeting 37 (February 2018) (Page 10).



grape crops is listed as \$101,364, \$79,597 and \$16,064 respectively in the Nimmo-Bell June 2018 Report.<sup>101</sup>

**Social and Cultural**

Potential benefits for other water users including recreational and cultural uses and any public health benefits from high flow water storage augmenting low flows.

Other community benefits include improving community resilience to climate change.

Policy 54 refers to considering water storage options 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. This will enable greater opportunity for community social and cultural concerns to be addressed.

As noted in the Cover Report to TANK Meeting 41 "...community well-being is provided for by access to water for abstraction and that adverse effects of human interactions do not necessarily

opportunity for non-complying activity applications to be made and assessed on their merits where the provisions of Schedule 7 cannot be met.

In this way the provisions are considered effective in achieving the objectives.

**Efficiency**

Objectives 14 and 16 and policy 53 assist efficiency by increasing certainty for would be applicants of regional plan objective and policy support for water storage proposals. Any such application would of course still need to satisfy the water values-based objectives and policies. In regard to these objectives and policies Schedule 7 also helps increase certainty by specifying flow allocations which enable the water values-based objectives to be achieved.

There will be reasonable consenting cost involved with discretionary resource consent applications, a lower level of activity status could reduce such costs however the water take structure of the plan is based on a discretionary activity status for new takes and

<sup>101</sup> 'Direct Economic Impact of the TANK', Nimmo-Bell (June 2018) (page 13).

always have to be avoided – sometimes they must be remedied or mitigated.”<sup>102</sup>

the significance of water storage structures also justifies assessment under such a status.

**Appropriateness**

Having regard to efficiency and effectiveness the proposed high flow take and water storage and use provisions are considered appropriate for giving effect to the relevant objectives of Change 9.

<p>Theme: Damming</p> <p>Provisions: Policies 51 and 55; Rules TANK 12, 13A and 14; and Schedule 7.</p> <p>Summary of Provisions:</p> <p>Policies 51 and 55 as set out in Table 37 above relate to: matters to consider in assessing applications to dam rivers and take water from the impoundment (Policy 51); and the protection of instream water values and uses by prohibiting the construction of dams on the mainstreams of those rivers listed in Table 36 above (Policy 55).</p>	<p>Dams are able to be applied for on their merits either as a discretionary or non-complying activity under TANK12 and 13A respectively, where not prohibited by TANK14. It is noted however that unlike the high flow take to out of stream water storage, there is no specific supporting policy for dams. This assessment is therefore provided in two parts firstly to assess the benefits of enabling dam applications under rules TANK12 / 13A and secondly to assess the benefits of prohibiting dams on the rivers specified in TANK14.</p> <p><b>Policy 51 and Rules TANK 12 and TANK 13A</b></p>	<p><b>Policy 51 and Rules TANK 12 and TANK 13A</b></p> <p>The matters to be considered in assessing dam applications are listed in policy 51. These provide a guide to the potential environmental, economic, social and cultural costs which are summarised below.</p> <p>Environmental</p> <p>Potential adverse changes to water quality arising from subsequent changes and intensification of land use activities as a result of water being allocated for take and use from the dam. The Production Land Use rules of Change 9 will however</p>	<p>Refer to the row above for a summary of the relevant objectives.</p> <p><b>Effectiveness</b></p> <p>The relevant objectives of Change 9 increase the need to maintain or enhance water quality compared to the status quo, with objectives 5 – 8 applying specific values to specific catchments. In response to achieving these objectives Rules TANK 12 and 13A in combination with Schedule 7 also limit the scope of dam proposals that could be assessed as a discretionary activity, compared to the status quo in which any dam application would be assessed as a discretionary activity. TANK 12 and Schedule</p>
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<sup>102</sup> Section 5, paragraph 20.

Rule TANK 12 provides for damming of surface waters and discharges from dams as a discretionary activity subject to a condition that the dam will not cause the flow regime of the river to be altered by more than the amount specified in schedule 7.

Rule TANK 13A makes damming of surface waters and discharges from dams a non-complying activity where the TANK 12 conditions are not complied with.

Rule TANK 14 makes dams a prohibited activity on the mainstem of the Ngaruroro River and its tributaries the Taruarau River and Omahaki River; and on the mainstem of the Tūtaekurī River and its tributaries the Mangaone River and the Mangatutu River.

Schedule 7 specifies that the limits for damming on the tributaries of the Ngaruroro and Tūtaekurī Rivers not covered by Rule TANK 14 is: No change

Some of the benefits of water storage from dams are similar to those from high flow takes as listed in the row above. The potential economic benefits are almost identical to those listed in the row above so are not repeated. The potential for and economic benefits of renewable electricity generation are also likely to be greater than for storage from high flows, as an instream dam is the more conventional method for hydro electricity generation.

#### Environmental

The environmental benefits for an instream dam will be lesser than for high flow storage due to the inevitable reduction and change of the instream values following dam construction. The conditions applying to TANK 12 however seek to ensure that for a dam to be eligible as a discretionary activity (rather than non-complying under Rule 13A) there can be no change of more than 10% to FREs in the mainstem of the applicable river. Compliance with this condition will ensure that there is still sufficient

apply, including TANK4 and TANK4a relating to changes in production land use activities.

Potential effects on water levels and flows in connected water bodies, including lakes and wetlands.

Potential effects on water quality, including effects on temperature and management of periphyton in connected water bodies (noting that the condition applying to Rule 12 seeks to address such effects).

Potential effects on river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat, including in relation to the storage impoundment.

Potential effects on groundwater recharge.

These potential effects are referenced in policy 51 and would need to be addressed under any resource consent application made under Rule 12 or 13A.

#### Economic

Economic costs would include the construction and implementation costs associated with the consenting of,

7 limit discretionary activity applications to proposals that maintain the flushing flows in the mainstream of the applicable river (FREs cannot be changed by more than 10%).

Where this cannot be met a dam proposal would need to pass the statutory tests of a non-complying activity<sup>104</sup> of either the adverse effects on the environment being minor or not being contrary to the objectives and policies of the Plan (which would include Change 9). This would be a difficult test to achieve given the water quality focus of the objectives (and in particular, Objective 1 / Schedule 1). In this way the provisions will be effective in achieving the objectives by only enabling on-line dams where water quality will not be compromised.

Clearly Policy 55 and Rule TANK14 go further than this by preventing the opportunity for applications to be made for dams on the specified rivers. This approach has been arrived at by the various sectors of the community as represented through the TANK group reaching a consensus that their kaitiaki and guardianship roles in relation to the Ngaruroro and Tūtaekurī Rivers and their

<sup>104</sup> Section 104D of the Resource Management Act 1991

of more than 10% to FRE<sub>3</sub> in the mainstem of the applicable river.

volume in high flows to not compromise flushing flows that remove periphyton and maintain macroinvertebrate structure.

Contribution to reducing carbon emissions if renewable electricity generation is enabled however remains an environmental benefit.

**Social and Cultural**  
Potential water security of supply benefits for the community including improving community resilience to climate change.

**Policy 55 and Rule TANK 14**  
The prohibition of damming on the mainstem of the Ngaruroro River and its tributaries the Taruarau River and Omahaki River; and on the mainstem of the Tūtaekuri River and its tributaries the Mangaone River and the Mangatutu River is considered to have the following benefits:

**Environmental**  
Instream values relating to natural flow regimes and natural character, including ecological values and habitat for indigenous species will not

construction and implementation of any dam.  
Potential costs arising from downstream riverbed stability, including through sediment transfer and management of vegetation in riverbeds

**Social and Cultural**  
Potential effects on downstream land, property and infrastructure at risk from failure of the proposed dam structure.  
Potential effects on competing water users, including recreational and cultural uses.  
Effects on cultural associations with the affected river.

**Policy 55 and Rule TANK 14**  
The costs of prohibiting dams on the specified rivers relate to the opportunity costs of potential benefits that will not be able to be realised. Effectively then, the costs of Policy 55 and TANK 14 are that the benefits listed in the left column in relation to Policy 51 and Rules 12 and 13A are not available to be realised for the specified rivers. This includes the potential benefits of renewable electricity generation from a dam associated with a hydro electric scheme.

specified tributaries require the prohibition of dams to ensure that the Schedule 1 water quality attributes can be achieved. This approach directly gives effect to objectives 15, 1 and 3 and is considered necessary to ensure that objectives 6 and 7 relating specifically to the Ngaruroro and Tūtaekuri Rivers catchments can be achieved.

**Efficiency**  
Given the strength of the regulatory provisions, the consenting costs for any dam will be high, particularly if the discretionary activity condition is unable to be met.

Given the water quality improvement and values protection approach of the objectives, prohibiting dams on the Ngaruroro and Tūtaekuri Rivers and the specified tributaries is arguably an efficient approach by providing certainty that dams are not appropriate on those rivers. Such an approach prevents the significant costs and risks of the resource consenting process coming into play if dam proposals on those rivers were to be assessed as discretionary or non-complying activities.

**Appropriateness**

be able to be adversely affected by a dam and associated changes in flow.

Economic

The main economic benefits of the damming prohibition would be those accrued from the ongoing recreational and cultural associations with the specified rivers. This includes the protection of the plant and fishery food resources available.

Social and Cultural

The prohibition on damming protects the viability of the recreational activities including angling and rafting associated with the specified rivers. There are strong hapū connections and whakapapa associated with the specified rivers with the prohibition on damming being consistent with the expression of Te Mana o Te Wai and the concept of ki utu ki tai.

Given the above assessment the proposed provisions will be effective in achieving the objectives of the plan. They may not be considered efficient from the perspective of resource users wishing to build an instream dam due to the consenting costs that would be involved. The provisions, including Policy 55 and Rule 14 do however provide certainty, and to this extent can be considered efficient in preventing costs being incurred in dam applications that would likely be contrary to the objectives of the plan. On this basis the provisions are considered appropriate for achieving the relevant objectives.

*Still to complete*

#### 8.5.6 Risk of Acting or Not Acting

An RMA section 32 evaluation report must contain an assessment of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions (under section 32(2)(c) the RMA). The reason for adopting the high flow take, damming and storage provisions in Change 9 is due to the increased information on the water quality attributes of the TANK catchments, water use and demand and freshwater over allocation issues. These provisions provide an increased ability to achieve the water quality attributes while helping to secure freshwater supply availability through storage compared to the status quo.

Not acting at all is not an option due to the need for Change 9 to give effect to the higher order resource management instruments including the Regional Policy Statement (Change 5) and the NPSFM which require improvements in water quality from the status quo.

As such there is little risk of acting in the manner proposed which will ensure improvements in the water quality of the TANK catchments and enable actions to be taken to provide high flow water storage to ensure security of freshwater supply over time.

#### 8.5.7 Conclusion

This above assessment demonstrates that the proposed provisions, relating to high flow takes, damming and storage, are the most appropriate for achieving the objectives of Change 9.



## 8.6 STORMWATER

### 8.6.1 Introduction

The stormwater provisions include the new rules proposed by Change 9, STORMWATER 1 - 5. It also includes 'Stormwater Management' policies 26 – 30 and Schedule 9 (Site Management Plan – Stormwater Management).

'Stormwater' is defined in the National Planning Standards<sup>105</sup> as follows:

*means run-off that has been intercepted, channelled, diverted, intensified or accelerated by human modification of a land surface, or run-off from the surface of any structure, as a result of precipitation and includes any contaminants contained within.*

As there is a much greater density of human modified impervious land surfaces that accelerate water run-off within urban areas, stormwater management is a significant issue within such areas of the TANK catchments.

The existing RRMP includes Rules 42, 43 and 52 for managing stormwater. Rule 42 permits the diversion and discharge of stormwater subject to conditions; Rule 43 provides for the diversion and discharge of stormwater from greater than 2ha of industrial land as a controlled activity, subject to conditions; and Rule 52 is the catch all discretionary activity rule applying when the conditions of Rules 42 and 43 cannot be met. The existing rules are relatively simplistic in regard to their conditions which relate to effects on the receiving channel and visually conspicuous changes in water composition after reasonable mixing for Rule 42. Rule 43 also includes conditions that there shall be no objectionable odour or significant adverse effects on aquatic life.

In reviewing the stormwater rules to be applied to the TANK catchments the following issues were identified to be addressed<sup>106</sup>:

- *New development and infrastructure: Focusing on 'retention and detention' of stormwater, and best practice approaches to design and treatment of stormwater.*
- *Source control: Reducing sources of contamination at point of discharge through appropriate site design.*
- *Management of legacy issues through Integrated Catchment Management Planning: the use of Resource Consents to prioritise retrofitting, riparian stream planting, and installation of treatment devices in the network.*

<sup>105</sup> Ministry for the Environment April 2019. Section 17, Clause 8 of the National Planning Standards require amendments to be made to combined regional policy statements and regional plans to comply (including with the definitions) by April 2022.

<sup>106</sup> Draft Stormwater Rules discussion document: progress to date; TANK Meeting 37, HBRC, page 1.



- *Consistency of approach: Integration of city, district and regional council rules and processes through shared services and standards, consistent resource consent requirements and a collaborative catchment management process.*

A TANK Stormwater Group (SWG) was established to assist the wider TANK group in its decision-making about improvements to the treatment and management of urban stormwater discharges through amendments to current policies and rules. The SWG comprised representatives from tangata whenua, HBRC, Hawke's Bay District Health Board, Forest & Bird, Napier City Council and Hastings District Council.<sup>107</sup>

## 8.6.2 Statutory Context

### 8.6.2.1 Resource Management Act 1991 (RMA)

The stormwater provisions of Change 9 seek to enable the diversion and drainage of stormwater provided the water quality and values of the receiving water is protected.

Such an approach is consistent with section 5 in enabling residents, business owners and urban communities to provide for their economic well-being and health and safety in managing the effects of stormwater, while supporting the environmental protection clauses of RMA section 5(2)(a)-(c).

The policy and regulatory direction in change 9 is to reduce contaminants at the point of discharge and to also achieve 'retention and detention' of stormwater, and best practice approaches to design and treatment. In doing so, Change 9 also recognises and provides for the matters of national importance listed in sections: 6(a) *the preservation of the natural character of the coastal environment... wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;* and 6(e) *the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*

These provisions also have regard to sections 7 (a) kaitiakitanga; (c) the maintenance and enhancement of amenity values; (d) intrinsic values of ecosystems; (f) maintenance and enhancement of the quality of the environment; and (h) the protection of habitat of trout and salmon.

The Council has a number of functions under section 30(1) of the RMA that are relevant to the diversion and discharge of stormwater. They include:

- Establishing, implementing and reviewing objectives, policies and methods to achieve integrated management of the natural and physical resources of the region (section 30(1)(a)).

<sup>107</sup> Ibid.



- Preparing objectives and policies in relation to any actual or potential effects of the use, development or protection of land which are of regional significance (section 30(1)(b)).
- The control of the use of land for the purpose of (section 30(1)(c)):
  - soil conservation (i);
  - the maintenance and enhancement of the quality of water in water bodies and coastal water (ii),
  - the maintenance of the quantity of water in water bodies and coastal water (iii);
  - the maintenance and enhancement of ecosystems in water bodies and coastal water (iia); and
  - the avoidance of mitigation of natural hazards (iv).
- The control of discharges of contaminants into or onto land or water, and discharges of water into water (section 30(1)(f)).
- If appropriate, setting rules in a regional plan to allocate the water quality. i.e. the capacity of water to assimilate a discharge of a contaminant (section 30(1)(fa)(iv))
- the establishment, implementation, and review of objectives, policies, and methods for maintaining indigenous biological diversity (section 30(1)(ga); and
- the strategic integration of infrastructure with land use through objectives, policies, and methods (gb).

#### 8.6.2.2 National Policy Statement for Freshwater Management 2014 (NPSFM)

The NPSFM (as summarised in section 3.4.1 of this report above) requires values and attributes to be assigned to Freshwater Management Units (FMUs) by engagement with the community including tangata whenua. The NPSFM includes two compulsory values, ('ecosystem health' and 'human health for recreation') and a list of optional 'other national values' that may be assigned to FMUs, including:

- *Natural form and character;*
- *Mahinga kai;*
- *Fishing*

These values can be enhanced by appropriate stormwater management and best practice approaches to the treatment of stormwater.

Objective A1 of the NPSFM reflects the above-mentioned compulsory values in requiring the safeguarding of the life supporting capacity of freshwater and the health and safety of communities as affected by contact with fresh water, in sustainably managing the use of land and discharge of contaminants.



Objective A2 of the NPSFM requires the overall quality of fresh water within catchments to be maintained or improved. In many locations within the TANK catchments water quality is below the objective levels set in Schedule 1 of Change 9.

Objective B1 includes safeguarding of life supporting capacity, ecosystem processes and indigenous species in sustainably managing the diverting of freshwater.

Objective B4 is to protect significant values of wetlands and of outstanding freshwater bodies.

Objective C1 and Policy C1 of the NPSFM require regional councils to improve integrated management of freshwater and the use and development of land. These provisions are pertinent in regard to stormwater discharges.

#### 8.6.2.3 Regional Policy Statement (RPS)

Objective LW1 requires that *"Freshwater and the effects of land use and development are managed in an integrated and sustainable manner..."* The subclauses of Objective LW1 include the following matters that are relevant to the proposed TANK stormwater provisions:

- 2. The maintenance of the overall quality of freshwater within the Hawke's Bay region and the improvement of water quality in water bodies that have been degraded to the point that they are over allocated;
- 4. Safeguarding the life supporting capacity and ecosystem processes of freshwater, including indigenous species and their associated freshwater ecosystems;
- 12. Recognising and providing for river management and flood protection activities;
- 13. Recognising and providing for the recreational and conservation values of fresh water bodies; and
- 14. Promoting the preservation of the natural character of the coastal environment, and rivers, lakes and wetlands, and their protection from inappropriate subdivision, use and development.

Objective LW3 'Tangata whenua values in management of land use and freshwater' is set out in full under section 8.3.2.3 above in regard to the riparian provisions of Change 9. Similarly, the improvement of stormwater management would assist in achieving Objective LW3.

Policy LW1 seeks to implement the above objectives through 'catchment based integrated management'. Of relevance to stormwater management provisions, clause (1) of this policy requires the adoption of an approach for each catchment area that:

- 1.b) provides for mātauranga a hapū and local tikanga values and uses of the catchment;



- 1.c) provides for the inter-connected nature of natural resources within the catchment area, including the coastal environment;
- 1.e) promotes collaboration and information sharing between relevant management agencies, iwi, landowners and other stakeholders;
- 1.gA involves working collaboratively with the catchment communities and their nominated representatives; and
- 1.h) ensures the timely use and adaptation of statutory and non-statutory measures to respond to any significant changes in resource use activities or the state of the environment;

Clause 3 of Policy LW1 states that when setting objectives ensure:

- a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water are safeguarded; and
- b) adverse effects on water quantity and water quality that diminish mauri are avoided, remedied or mitigated; and
- c) the microbiological water quality in rivers and streams is safe for contact recreation where that has been identified as a value under Policy LW1.2 or Policy LW2 Table 1.

The stormwater management provisions in Change 9 will help achieve RPS policy LW1(3).

Policy LW1(4) sets out matters to be given regard when setting methods and timeframes to achieve limits and targets as follows:

- a) allowing reasonable transition times and pathways to meet any new water quantity limits or new water quality limits included in regional plans. A reasonable transition time is informed by the environmental and socio-economic costs and benefits that will occur during that transition time, and should include recognition of the existing investment

Proposed Policies 26, 28 and 29 require the Napier City and Hastings District councils to have undertaken various actions to improve stormwater quality and quantity by 1 January 2025. Such an approach seeks to give effect to RPS Policy LW1(4) by providing a 'reasonable transition time'.

Policy LW2 includes:

- ...1. Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3: a) Greater Heretaunga / Ahuriri Catchment Area;...
- 3. When managing the freshwater bodies...: a) recognise and provide for the primary values and uses identified in Table 1; and b) have particular regard to the secondary values and uses identified in Table 1;...

The primary values for the TANK catchments, which in Table 1 are referred to as the Greater Heretaunga / Ahuriri Catchment Area, include values that are associated with or would be enhanced by appropriate stormwater management, being:



- *Cultural values and uses for: mahinga kai, nohoanga, taonga raranga and taonga rongoa*
- *Trout spawning habitat*

Relevant secondary values, include:

- *Amenity for contact recreation (including swimming) in lower Ngaruroro River, Tutaekuri River and Ahuriri Estuary*
- *Any locally significant native water bird populations and their habitats*
- *Native fish habitat, notwithstanding native fish habitat as a primary value and use in the Tutaekuri River and Ngaruroro River catchments*
- *Trout habitat, where not identified as a primary value and use*

The following amendments resulting from Change 5 to other RRMP objectives and policies are also relevant to the stormwater management provisions of Change 9:

*OBJ 25 The quantity of water in wetlands, rivers and lakes is suitable for sustaining aquatic ecosystems, for achieving other freshwater objectives, and ensuring resource availability for a variety of purposes across the region, while recognising the impact caused by climatic fluctuations in Hawke's Bay.*

*OBJ 27 The water quality in rivers, lakes and wetlands is suitable for sustaining or improving aquatic ecosystems and other freshwater objectives identified in accordance with a catchment based process as set out in Policy LW1 and Policy LW2, including contact recreation purposes where appropriate.*

### 8.6.3 Relevant Objectives of Change 9

Given the statutory context provided above, it is those objectives relating to: water quality protection including providing for the values of mauri and ecosystem health are relevant to stormwater management as are those enabling discharges and diversions of freshwater.

Therefore, the evaluation of the appropriateness of the provisions should be against the following relevant Change 9 objectives: 1, 2, 3, 5 - 10, and 15 (see section 7.2 above).

Objective 15 specifically references stormwater and for convenience is quoted as follows:

*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.*



#### 8.6.4 Overview of Practicable Options

The status quo regulation applying to stormwater in the RRMP (as summarised under section 8.6.1 above) is not considered to be adequate for managing water quality within the receiving water to a level that will allow the objectives of Change 9 to be achieved. Accordingly retaining the status quo provisions was not considered as a practicable option by the TANK group.

The following table summarises the stormwater issues identified within the TANK catchment by the SWG.

**Table 39 – Stormwater Working Group Stocktake of Issues (TANK Meeting 37, Feb 2018)**

Issue	Explanation / Detail
Network capacity	Are networks future proofed and adequate? Can they withstand effects of climate change? Date of implementation has an impact
Levels of Service	Secondary channels for extreme events (1 in 10 years)
Hastings specific issues	Overland flow paths Streams Urban discharge into the open networks Not too many urban amenities
Managing contaminants	Nutrients Trace metals Emerging organic materials TPHs (total petroleum hydrocarbons) PAHs (polycyclic aromatic hydrocarbons) Emerging organic materials
Impact of contaminants on the receiving environment's ecosystem functions and services	
Increased pressure on networks from new developments	
Changing expectations on usage of stormwater corridors	Paradigm shift in expectations on usage i.e. recreational value, paths etc.
Urban/industrial run off	
Retrofitting of stormwater devices	Not easy and can be expensive
Rural run-off	More of an issue with Hastings from orchards, agriculture etc. Particularly bad in Ruahapia where contaminants hugely exceed guidelines Rural drainage systems counted as point source (tile drainage and farm drain discharge points)



Water quantity	Increased impervious surfaces Reduced base loads Odour issues
Loss of biodiversity values	Particularly relevant to Napier, where most stormwater is pumped
LIDs (low impact development) design tools as stormwater management devices	Not always well managed or designed Councils can be reluctant to adapt
Discharge to groundwater via soakage	Allowing stormwater discharge to occur over aquifers without fully understanding what the effects are and the impacts between reticulations systems, and there is little monitoring This is particularly an issue on Omaha Road and Maraekakaho
Monitoring of old dumps and landfills	
Efficient disposal of stormwater v biodiversity function	
What is an outstanding or an important body of water?	What water bodies are prioritised for protection?
Mahinga kai	Displacement of tikanga Māori values
What is achievable v not achievable?	
Role of education	Changing attitudes towards storm water
Lack of affordable and practical onsite treatment options	
Lack of best practice site management	
Coastal environment demarcation	Urban stormwater discharged into the coastal environment (e.g. along the motorway and into the Ahuriri estuary) so being subject to the HBCEP and not the RRMP. Will there be a consequential change to the HBCEP to address this?
Point source apportionment	If limits are to be included a la FMU's, then how are you able to tell what comes from where for management purposes? Would need to measure/monitor above the point where the discharge to environment occurs as well as below the discharge point for comparison
Flood control networks	These have a priority in regulation although they are a source of stormwater. Potential conflict in regs
Sediment control / eradication	Smothering of benthic communities, spawning areas; heavy metals and PAH's in situ; Stoney to silt and muds



This list of issues highlights that the importance of stormwater management in regard to improving environmental outcomes and avoiding natural hazards and the range of non-regulatory methods that can assist in such management in addition to regulation. It also highlights the multiple relevant issues to the management of stormwater within the TANK catchments.

Managing the effects of stormwater can be challenging in the urban situation due to the multiple players involved. This includes the many individual property owners and occupiers responsible for the initial source of the stormwater, to the territorial local authorities in managing the urban stormwater network and the regional council with its responsibility for the management of the receiving water.

Other practicable options to the provisions proposed through the stormwater policies and Rules 1-4 are set out in the following table.

Rule	Potential Alternative	Comment
STORMWATER 1 & 2	A stricter regulatory alternative would be to require controlled activity resource consent for all standalone stormwater discharges through applying a controlled activity status. This would then provide a regulatory process mechanism for checking that the conditions associated with the proposed permitted activity rule are met in ensuring that the discharge will not have any adverse effects on the environment.	Such an approach would not be efficient. It would mean that almost every building consent processed by a territorial authority for a new building outside the reticulated urban stormwater network, would also require controlled activity resource consent from HBRC. This would increase costs for the applicant and necessitate them to deal with two local authorities rather than one
STORMWATER 3	An alternative option would be to apply a discretionary activity status to the rule (rather than the proposed controlled activity status) and put the onus on the TA to demonstrate how they will ensure that any adverse effects are no more than minor and that consistency with the objectives and policies will be achieved.	This option would avoid the need for prescription in rule conditions (as is proposed in STORMWATER 3) but would significantly reduce the certainty that a controlled activity status (consent must be granted but conditions can be set) provides to the territorial authorities. Such an approach would not achieve the working together intent of Objective 15 and would ignore the statutory responsibilities that TA's have for providing good quality local infrastructure and maintaining and



enhancing the quality of the environment.<sup>108</sup>.

STORMWATER 4	<p>An alternative option to the proposed restricted discretionary activity rule (Stormwater 4) for industrial or trade premises exceeding an impervious surface area of 1,000m<sup>2</sup> would be to have a more effects based approach for determining when resource consent is required.</p> <p>Such an approach could for example include a method for establishing 'low risk' and 'high risk' industrial or trade premises through the use of an effects matrix which could be included in Change 9 as a schedule.</p> <p>The stormwater contamination risk of the discharge from the industrial or trade premises would then be assessed through the matrix and subsequently restricted discretionary activity resource consent would be required for 'high risk' activities.</p> <p>Low risk activities would either require controlled activity resource consent or be permitted activities.</p>	<p>Such an approach would be difficult to implement in a manner allowing low risk activities to be permitted as there would be no formal resource consent process through which assessment via the matrix could be managed. Controlled activity status for low risk activities would be a way of achieving this but would mean even very small low risk industrial or trade premises would require resource consent. This would not be an efficient approach.</p> <p>A single restricted discretionary category for industrial and trade premises with an impervious surface area of greater than 1,000m<sup>2</sup> is a flatter and more simplistic structure from a regulatory perspective. Clearly there would be options of setting the 1,000m<sup>2</sup> threshold at a different level and this will be able to be tested through the schedule 1 submission process.</p> <p>The matrix option was considered by the SWG but not adopted due to the increased complexity that it would bring.</p>
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The stormwater provisions proposed within Change 9 are set out below and are considered to be more appropriate than the potential alternatives considered above.

**Table 40– Stormwater Management Proposed Change 9 Provisions**

Ref	Provision / Provision Summary
Policy 26.	The adverse effects of stormwater quality and quantity on aquatic ecosystems and community well-being arising from existing and new urban development (including infill

<sup>108</sup> Local Government Act 2002, sections 10 and 14(1)(h)(ii)



development), industrial and trade premises and associated infrastructure, will be reduced or mitigated no later than 1 January 2025, by:

- a) Local Authorities adopting an integrated catchment management approach to the collection and discharge of stormwater
- 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 exacerbating flood hazards;
- d) taking into account site specific constraints including areas with high groundwater, source protection zones, and/or an outstanding water body;
- 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;
- f) taking into account the effects of climate change when providing for new and upgrading existing infrastructure;
- g) adopting, where practicable, a good practice approach to stormwater management including adoption of Low Impact Design for stormwater systems;
- h) amending district plans, standards, codes of practice and bylaws to specify design standards for stormwater reticulation and discharge facilities through consent conditions, that will achieve the freshwater objectives set out in this plan
- i) developing and making available to the public advice about good stormwater management options (including through HBRC's guidelines)
- j) encouraging, through education and public awareness programmes, greater uptake and installation of measures that reduce risk of stormwater contamination;
- k) requiring, no later than 1 January 2025, the preparation and implementation of a site management plan and good site management practices on industrial and trade premises with a high risk of stormwater contamination and those in the high priority areas:
  - (i) of the Ahuriri catchment;
  - (ii) of the Karamu River and its tributaries;
  - (iii) of land over the unconfined aquifer and
  - (iv) within identified drinking water Source Protection Zones.

Policy 27. Sources of stormwater contamination and contaminated stormwater will be reduced by;

- 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 water 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 contaminants;
- c) Controlling, and if necessary avoiding, activities that will result in water quality standards not being able to be met.

Policy 28. Aquatic ecosystem health improvements and community wellbeing and reduced stormwater contamination will be achieved by HBRC working with the Napier City and Hastings District Councils requiring discharges from stormwater networks to meet:

- a) water quality objectives (where they are degraded by stormwater) and the identification of measures that ensure stormwater discharges will achieve at least:



- (i) the 80th percentile level of species protection in receiving waters by 1 January 2025 and
- (ii) the 95<sup>th</sup> percentile level<sup>109</sup> of species protection by 31 December 2040, and
- b) except as in (a) above, the management objectives in Schedule 1 for freshwater and estuary health through resource consent conditions, including requirements:
  - (i) to apply the Stream Ecological Valuation methodology to inform further actions;
  - (ii) to install treatment devices within the drainage network where appropriate;
  - (iii) for stream planting/re-alignment for aquatic ecosystem enhancement;
  - (iv) for Wetland creation, water sensitive design and other opportunities for increasing stormwater infiltration where appropriate;
  - (v) Recognise existing and planned investments in stormwater infrastructure.

**Policy 29.** To achieve the freshwater quality objectives in this Plan, HBRC, with the Napier City and Hastings District Councils will, no later than 1 January 2025, implement similar stormwater performance standards including through the adoption of:

- a) best practice engineering standards,
- b) consistent plan rules and bylaws;
- c) shared information and approaches to education and advocacy;
- d) Shared information and processes for monitoring and auditing individual site management on sites at high risk of stormwater contamination;
- e) consistent levels of service for stormwater management and infrastructure design;
- f) an integrated stormwater catchment management approach;

and through

- g) undertaking a programme of mapping the stormwater networks and recording their capacity.
- h) aligning resource consent processes and having joint hearings to achieve integrated management of proposals for urban activities, particularly in respect of stormwater, water supply and wastewater provisions and implementation of the HPUDS.

**Policy 30.** The Council will support the development of an Integrated Catchment Management Plan of the Ahuriri Estuary. Measures to improve the quality of freshwater entering into the estuary will be adopted as well as investigations to better understand the processes and functions occurring within the estuary and its connected freshwater bodies.

Rule Storm- water <sup>1</sup>	(a) The diversion and discharge of stormwater into water, or onto land where it may enter water from any new or existing and lawfully established residential activities;
	(b) non-industrial or trade premise;
New and existing activities	(c) industrial or trade premise with less than 1,000 m <sup>2</sup> of impervious areas;
	(d) rural building.

**Permitted Activity** subject to 11 conditions.

<sup>109</sup> ANZECC Guidelines 2018 (Australia and New Zealand Guidelines for Fresh and Marine Water Quality)



- Rule Storm-water2
- (a) The diversion and discharge of stormwater into water, or onto land where it may enter water from any new or existing and lawfully established residential activities;
  - (b) non-Industrial or trade premise;
  - (c) industrial or trade premise with less than 1,000 m<sup>2</sup> of impervious areas;
  - (d) rural building.

**Restricted Discretionary Activity** where one or more of the Stormwater 1 conditions cannot be met. Assessment is subject to seven matters of discretion.

- Rule Storm-water3
- Existing or new TA managed storm-water network
- Diversion and discharge of stormwater from an existing or new local authority managed stormwater network into water, or onto land where it may enter water
- Controlled Activity** subject to 9 conditions including the provision of an Integrated Catchment Management Plan.
- The Integrated Catchment Management Plan itself is subject to 12 matters that it must include and / or address including monitoring programmes, where discharges result in the receiving water being below the schedule 1 standards, and a programme of mitigation measures and timeframes for the enhancement of such water ways.

- Rule Storm-water4
- Industrial or Trade Premises
- Discharge of stormwater to water or onto land where it may enter water from any industrial or trade premises – **Restricted Discretionary Activity**, subject to meeting 13 conditions, which relate to (as summarised):
- (a). Application shall include an Urban Site-Specific Stormwater Management Plan (Schedule 9).
  - (b). Discharge: not to cause erosion; not to flood other properties or have surface ponding; not to contain hazardous substances; is not to land if within an SPZ.
  - (c). Discharge shall not cause any of the following after reasonable mixing: floatable or suspended materials or odours; unsuitability for consumption by farm animals; degradation of habitat; no discharge of microbiological contaminants.
  - (d) Discharge shall not contribute to degradation of habitats or include microbiological contaminants.
  - (e). There is no stormwater network available at the property boundary.
  - (e). Structures to be clear of debris and not obstruct fish passage.

Assessment of applications is subject to seven matters of discretion.

- Rule Storm-water5
- The diversion and discharge of stormwater into water, or onto land where it may enter water. This rule applies where the conditions of rules Stormwater 3 or 4 cannot be complied with. **Discretionary Activity**.



Schedule 9	Site Management Plan for Stormwater Management – sets out information requirements to be included in such a plan required to accompany application under Rules STORMWATER 3 and 4 for territorial local authority stormwater networks and industrial and trade premises.
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8.6.5 Assessment of Efficiency and Effectiveness of the Stormwater Provisions

The assessment of the changes to the policies, rules and other methods under sections 32(1)(b) and (2)(a) of the Act, is provided in Table 41 below. The new policies, rules and other methods (Schedules 9 and 10 ) included in this plan change are set out under Table 40 above and assessed for their appropriateness in achieving the objectives of the Plan Change below.

Table 41- Assessment of the Stormwater Management Provisions under sections 32(1)(b)(ii) and (iii), 32(2) (a) and (b) and 32(3) of the Act

Theme, Provisions and Summary of Provisions	Assessment Under RMA Section 32(2)		Assessment under RMA Section 32(1)(b)
	Environmental, Economic, Social and Cultural Benefits	Environmental, Economic, Social and Cultural Costs	Having regard to the appropriateness of the provisions by assessing their efficiency and effectiveness in achieving the objectives
<p>Theme: Individual Discharges – including standalone buildings and industrial and trade premises</p> <p>Provisions: Policies 26, 27, and 30; Rules STORMWATER 1, 2, 4 and 5; and Schedule 9.</p> <p>Summary of Provisions:</p> <p>Policy 26 (as set out in Table 41 above) seeks that the adverse effects of stormwater, including from industrial and trade premises, on aquatic ecosystems and community well-being will be reduced or mitigated by 1</p>	<p>Clearly improvements in reducing contaminant levels in stormwater will benefit the quality of water in the receiving water body downstream of the discharge. The focus of policies 26, 27 and 30 seek to achieve this outcome with Policy 30 specific to improving the water quality of the Ahuriri Estuary. There will also be social and cultural benefits from improvements in the quality of the receiving water if the quality of stormwater can be improved. See the extracts from the Cole et al Social and Cultural Impact Assessment Report in the column to the right. Managing</p>	<p>In considering economic costs, most standalone industrial and trade premises are going to require resource consent under STORMWATER 4. This cost is however considered to be justified to enable water quality objectives to be met given the contamination risks that yard areas of some industrial premises may have. There is no quantification of these costs available but they would typically involve the engagement of professionals to prepare resource consent applications, Council resource consent processing costs and condition monitoring costs, in addition to any costs associated with</p>	<p>Objectives: 1, 2, 3, 5 – 10, and 15 are identified in section 8.6.3 as being the most relevant to these provisions. For convenience the objectives are summarised as follows:</p> <p>Objective 1 relates to establishing the Objectives In Schedule 1; Objective 2 seeks te mana o te wai (integrated mountains to the sea) and continuous improvement approaches to the management of freshwater; Objective 3 is for the Schedule 1 values, particularly mauri and ecosystem health to be achieved through collectively managing the attributes; Objectives 5 – 10</p>

January 2025. Policy 27 seeks that sources of stormwater contamination be reduced at source. Policy 30 is specific to improving the quality of freshwater entering the Ahuriri Estuary, including the development of an integrated catchment management plan.

Rule STORMWATER 1 provides for stormwater discharges from stand-alone residential and other activities, and from industrial or trade premise with less than 1,000m<sup>2</sup> of impervious surface area as a permitted activity subject to conditions. Where these conditions are not meet rule STORMWATER 2 requires restricted discretionary activity resource consent. Rule STORMWATER 4 applies to industrial and trade premises exceeding 1,000m<sup>2</sup> of impervious surface area as a restricted discretionary activity subject to conditions. Where these conditions are not meet rule STORMWATER 5 requires discretionary activity resource consent.

stormwater quantity to avoid and mitigate the effects of flooding is clearly also important in seeking environmental, economic, social and cultural benefit and this is specifically sought by Policy 26.

In implementing these policies, rules STORMWATER 1, 2, 4 and 5 seeking to increase environmental protection in regard to both stormwater discharge quality and quantity in comparison to the status quo. It is noted there is an increase in the number and specificity of conditions required to be met under STORMWATER 1 to be a permitted activity in comparison to the corresponding status quo RRMP rule 42. In regard to industrial and trade premises the threshold for requiring resource consent under the RRMP is the discharge applying to an area of land greater than 2ha, under STORMWATER 1 and 4 this reduces to 1,000m<sup>2</sup> of impervious surface area. That is, if the premises has an impervious surface area greater than

achieving compliance with the district plan rule conditions and any resource consent conditions.

The potential social and cultural costs of stormwater quality issues are highlighted in the Cole et al Social & Cultural Impact report in the following extracts:

*The definition of urban waterways needs to be improved. If these water bodies have significant ecological values then they should not be defined as drains that are only used for moving surface stormwater. The current regional plan fails to provide clarity on this matter and this means that it is difficult to enforce management behaviours that support and enhance ecological values.*<sup>110</sup>

*It is easy to say 'hey farmers get your act together' but cities need to deal with stormwater. This is a big issue as well. A lot of that runoff is actually quite toxic.*<sup>111</sup>

*Some industries are just not aware of how they are affecting water quality. For example, I worked in an industry that had a broken concrete floor and pollutants we*

relate to improving and maintaining mauri, water quality and water quantity in the respective TANK freshwater bodies; and Objective 15 requires Council, tangata whenua and urban and rural communities working together in a way that recognises the kaitiaki and guardianship roles that each play in freshwater management.

Collectively then these objectives require improvement in degraded waterbodies including by improving the quality and quantity of stormwater discharges entering freshwater.

**Effectiveness**

The additional conditions proposed to STORMWATER 1 and 2 compared to the status quo and the increased regulation of industrial and trade premise stormwater discharges through STORMWATER 4 will ensure that the regulation applying to stormwater addresses the water quality and quantity improvements sought by objectives 1 - 3, and 5 – 10. Objective 15 is given effect to by the stormwater rule conditions requiring

<sup>110</sup> Page 14

<sup>111</sup> Page 17



Schedule 9 provides a list of content to be included in site management plans which are a required condition under STORMWATER 4 for industrial or trade premise

this, it is required to be assessed as a restricted discretionary activity under STORMWATER 4.

Regarding Economic Benefits, certainty is provided to landowners that standalone stormwater discharges can proceed as a permitted activity provided the conditions of STORMWATER 1 can be met.

*were using escaped. These were nasty chemicals. The nearby waterway was tested for chemical residues, but not the soil under the building etc. There are lots of industries in Napier. In Napier, much of our stormwater flows through the industrial area.*<sup>112</sup>

It is considered that the proposed stronger regulation applying to industrial and trade premises will help address the concerns listed in the above extracts and will therefore help reduce the social and cultural costs of stormwater discharges.

good land and water management practices are followed. For example, the requirement for a Site Specific Stormwater Management Plan to be included with resource consent applications for industrial and trade premises under STORMWATER 4 and in accordance with Schedule 9. In this way the provisions are considered effective in achieving the objectives.

**Efficiency**

As mentioned in the costs column, a greater amount of regulation is required than the status quo in regard to industrial and trade premises, however this is considered to be necessary to ensure that the objectives can be met in combination with the increased performance expected of local authority reticulated networks as discussed below. A high level of efficiency is still achieved with non-industrial and trade premise stormwater discharges being able to achieve permitted activity status under STORMWATER 1.

**Appropriateness**

<sup>112</sup> Page 39



Having regard to efficiency and effectiveness the proposed stormwater provisions applying to standalone activities are therefore considered appropriate in meeting the relevant objectives.			
Theme: Territorial authority managed stormwater networks	Policies 26, 27 and 30 are referred to above in seeking environmental benefits through the improvement of stormwater quantity and quality. Policies 28 and 29 are specific to Council stormwater networks in achieving quality improvements by set dates including by working together and adopting a consistency of approach. Again, the achievement of these policies would result in a clear environmental benefit with some potential economic efficiency benefits by the Councils working together to achieve these environmental outcomes.	In considering economic costs, the consenting requirements for urban stormwater networks will be increased with the additional conditions and Integrated Catchment Management Plan requirements of STORMWATER 3. This cost is however considered to be justified to enable water quality objectives to be met given the identified issues with existing discharges into the Ahuriri and Karamu catchments. There is no quantification of these costs available, but they are potentially significant and will be borne by ratepayers. The collaborative approach proposed by Policy 29 will be important in helping to create cost efficiencies by the councils working together.	Objectives: 1, 2, 3, 5 – 10, and 15 are identified in section 8.6.3 as being the most relevant to these provisions. Refer to the row above for a summary of these objectives:
Provisions: Policies 26 - 30; Rules STORMWATER 3 and 5 and Schedule 9.			<b>Effectiveness</b>
Summary of Provisions:			The additional conditions proposed to STORMWATER 3, including the requirement for an Integrated Catchment Management Plan, compared to the status quo will ensure that the regulation applying to stormwater addresses the water quality and quantity improvements sought by objectives 1 - 3, and 5 – 10. Objective 15 is given effect to by the stormwater 3 conditions requiring good land and water management practices are followed. Also, requiring integrated catchment plans as a condition provides opportunity for catchment management programmes and monitoring initiatives and urban stormwater programmes (Objective 15(c)). In this way the provisions are
Policy 26 directs NCC and HDC to reduce and mitigate the effects of stormwater quality and quantity by 1 January 2025 by adopting an integrated catchment approach to stormwater management and various other measures. Policy 27 seeks that sources of stormwater contamination be reduced at source. Policy 28 directs NCC and HDC to meet water quality objective targets by set dates where fresh water is degraded by stormwater. Policy 29 seeks collaboration between HBRC, NCC and HDC and a consistency in approach in achieving stormwater performance standards by 1 January	As discussed above there will also be social and cultural benefits from improvements in the quality of stormwater and therefore the receiving water.  In implementing these policies, rules STORMWATER 3 and 5 seek to increase environmental protection in	The potential social and cultural costs of stormwater quality issues are highlighted from the Cole et al Social & Cultural Impact report in the row above.	



2025. As set out above Policy 30 seeks improving freshwater quality entering the Ahuriri Estuary.

Rule STORMWATER 3 makes discharges from local authority managed stormwater networks a controlled activity subject to meeting conditions including the provision of an Integrated Catchment Management Plan. Where these conditions are not meet rule STORMWATER 5 requires discretionary activity resource consent.

Schedule 9 provides a list of content to be included in site management plans which are a required condition for sites identified as high risk within the network catchment under STORMWATER 3.

regard to both stormwater discharge quality and quantity in comparison to the status quo. It is noted there is an increase in the number and specificity of conditions required to be met under STORMWATER 3 to be a controlled activity in comparison to the corresponding status quo RRMP rule 43. Specifically, the conditions for STORMWATER 3 require the resource consent application to include an Integrated Catchment Management Plan required to include measures to both increase quality by reducing the potential for contaminants at source and to mitigate the quantity of runoff in storm events.

Regarding Economic Benefits, certainty is still provided to the NCC and HDC that consent will be granted if the controlled activity conditions of STORMWATER 3 can be met.

It is considered that the more prescriptive conditions applying to discharges from Council stormwater networks will help reduce the environmental and subsequent social and cultural costs of such discharges.

A potential environmental cost could be a mismatch between the target dates specified in the policies (generally based on 1 January 2025) and the ability to apply the corresponding rules in time to be able to meet these targets. The Hastings District Council urban stormwater discharge consent is due for renewal in 2023, while the Napier City Council stormwater discharges are held in various different consents with different expiry dates including 2023, 2025, 2026(x2) and 2038. The HDC stormwater discharge renewal and some of the NCC renewals should result in new consents in place under Change 9 prior to 1 January 2025 with additional mitigation measures implemented.

considered effective in achieving the objectives.

Efficiency

As mentioned in the costs column, a greater amount of regulation is required than the status quo in terms of controlled activity conditions applying to discharges from urban stormwater networks. This is considered to be necessary to ensure that the objectives can be met. Certainty is still however provided to the councils that consent will be granted, given the controlled activity status.

Appropriateness

Having regard to efficiency and effectiveness the proposed stormwater provisions applying to local authority stormwater networks are therefore considered appropriate in meeting the relevant objectives.

Still to complete



#### 8.6.6 Risk of Acting or Not Acting

An RMA section 32 evaluation report must contain an assessment of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions (under section 32(2)(c) the RMA). The reason for adopting the stormwater provisions in Change 9 is due to the increased information on the water quality attributes of the TANK catchments, including degraded water quality in the Ahuriri and Karamu Catchments, some of which is attributed to stormwater discharges. These proposed stormwater provisions will provide an increased ability to achieve the water quality attributes in Schedule 1 and mitigate adverse water quantity effects.

Not acting at all is not an option due to the need for Change 9 to give effect to the higher order resource management instruments including the Regional Policy Statement (Change 5) and the NPSFM which require improvements in water quality from the status quo.

As such there is little risk of acting in the manner proposed which will ensure improvements in the water quality and quantity of the TANK catchments affected by urban stormwater networks (Ahuriri and Karamu).

#### 8.6.7 Conclusion

This above assessment demonstrates that the proposed provisions, relating to the diversions and discharge of stormwater, are the most appropriate for achieving the objectives of Change 9.



## 8.7 WATER TAKES

### 8.7.1 Introduction

The provisions assessed in this category relate to water takes and the transfer of permits, including new rules TANK 5 – 10; amended RRMP rules 61 & 62 and new RRMP rules 62a and 62b; Schedules 6 and 8; and Policies 36 – 50.

These are the provisions that regulate water takes from both ground water and fresh water within the TANK catchments. The provisions also address matters such as efficiency of use and allocation, permit transfer and duration, allocation priority, over allocation and water takes for frost protection.

The TANK water take rules provide for:

- The take and use of up to 5m<sup>3</sup> per day of surface water (TANK 5) and ground water (TANK 6) as a permitted activity subject to conditions;
- The reapplication of existing takes of ground water (TANK 7) and surface water (TANK 8) as a restricted discretionary activity subject to conditions;
- The take and use of surface water (low flow allocations) and groundwater as a discretionary activity (TANK 9) subject to conditions; and
- The take and use of surface or groundwater not complying with TANK 9 as a non-complying activity (TANK 10).

Amendments are proposed to the RRMP rules in regard to the transfer of permits within the TANK catchments as follows:

- Transfer of permits to take and use water subject to conditions as a controlled activity (RRMP 62a); and
- Transfer of permits to take and use water not complying with rule 62a as a discretionary activity (RRMP 62b).

Schedule 6 'Flows, Levels and Allocation Limits' sets out the minimum flows for different freshwater bodies and allocation limits from those water bodies. Schedule 8 'Water Permit Expiry Dates' sets out the current common expiry dates and next expiry dates for different water bodies.

### 8.7.2 Statutory Context

#### 8.7.2.1 Resource Management Act 1991 (RMA)

The Water Take provisions of Change 9 seeks to sustainably manage the take and use of water from freshwater bodies in the TANK catchments in giving effect to section 5 of the RMA. The subsequent use of this water provides for the farmer and grower communities or industrial and commercial users to provide for their economic well-being. Regarding



takes for municipal supplies, the use of the water will enable urban communities to provide for their social well-being and health and safety. Policies 36, 38, 40, 41 and 44 and the associated rules seek to ensure that the environmental protection clauses of RMA section 5(2)(a)-(c) are met. In addressing the sustainable management of water quantity within the TANK catchments, safeguarding the life-supporting capacity of water and ecosystems (s5(2)(b)) is of significance. This matter is addressed by Policy 36 'Flow Management Regimes' and the associated minimum flows and allocation limits for the respective TANK freshwater bodies in Schedule 6. As is explained further below, Change 9 reduces some existing water take allocations and introduces new allocations for other water bodies in seeking to sustainably manage water quantity.

This general reduction in water allocation for the take and use of water from the TANK freshwater bodies proposed in Change 9 is also relevant to the following section 6 matters of national importance:

*(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;*

*(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna;*

*(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga*

The proposed Water Take provisions of Change 9 also seek to have regard to sections 7 (a) kaitiakitanga; (b) the efficient use and development of natural and physical resources; (c) the maintenance and enhancement of amenity values; (d) intrinsic values of ecosystems; (g) any finite characteristics of natural and physical resources; (f) maintenance and enhancement of the quality of the environment; and (h) the protection of habitat of trout and salmon.

The Council has a number of functions under section 30(1) of the RMA that are relevant to the Water Take provisions of Change 9. They include:

- Establishing, implementing and reviewing objectives, policies and methods to achieve integrated management of the natural and physical resources of the region (section 30(1)(a)).
- Preparing objectives and policies in relation to any actual or potential effects of the use, development or protection of land which are of regional significance (section 30(1)(b)).
- The control of the use of land for the purpose of (section 30(1)(c)):
  - the maintenance and enhancement of the quality of water in water bodies (ii), and
  - the maintenance of the quantity of water in water bodies and coastal water (iii):



- the maintenance and enhancement of ecosystems in water bodies and coastal water (iia);
- The control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any water body, including (section 30(1)(e)):
  - (i) the setting of any maximum or minimum flows of water;
  - (ii) the control of the range, or rate of change, of levels or flows of water;
- If appropriate, the establishment of rules in a regional plan to allocate any of the following (section 30(1)(fa)):
  - (i) the taking or use of water (other than open coastal water);
- A rule to allocate a natural resource established by a regional council in a plan under subsection (1)(fa) or (fb) may allocate the resource in any way, subject to the following (section 30(4)):
  - (a) the rule may not, during the term of the existing consent, allocate the amount of a resource that has already been allocated to the consent; and
  - (c) the rule may allocate the resource in anticipation of the expiry of existing consents; and
  - (d) in allocating the resource in anticipation of the expiry of existing consents, the rule may –
    - (i) allocate all of the resource used for an activity to the same type of activity; or
    - (ii) allocate some of the resource used for an activity to the same type of activity and the rest of the resource to any other type of activity or no type of activity; and
  - (e) the rule may allocate the resource among competing types of activities;

#### 8.7.2.2 National Policy Statement for Freshwater Management 2014 (NPSFM)

The NPSFM (as summarised in section 3.4.1 of this report above) requires values and attributes to be assigned to Freshwater Management Units (FMUs) by engagement with the community including tangata whenua. The NPSFM includes two compulsory values, ('ecosystem health' and 'human health for recreation') and a list of optional 'other national values' that may be assigned to FMUs, including:

- *Natural form and character;*
- *Mahinga kai*
- *Fishing*
- *Irrigation, cultivation and food production*



- *Animal drinking water*
- *Wai tapu*
- *Water supply*
- *Commercial and Industrial use*
- *Hydro-electric power generation*
- *Transport and tauranga waka*

These values can all be relevant to the Water Take provisions of Change 9 and the effects of such uses.

Objective AA1 of the NPSFM is to consider and recognise Te Mana o te Wai in the management of fresh water

Objective A1 of the NPSFM reflects the above-mentioned compulsory values in requiring the safeguarding of the life supporting capacity of freshwater and the health and safety of communities as affected by contact with fresh water in sustainably managing the use of land and discharge of contaminants.

Objective A2 of the NPSFM requires the overall quality of fresh water within the TANK catchments to be maintained or improved, including quality where the waterbody has been degraded by human activities to the point of being overallocated. In many locations within the TANK catchments water quality is below the objective levels set in Schedule 1 of Change 9 and in some of the TANK catchments freshwater is considered overallocated by water takes.

Objective B1 of the NPSFM requires the safeguarding of the life-supporting capacity, ecosystem processes and indigenous species in sustainably managing the taking, using, damming, or diverting of fresh water.

Objective B2 of the NPSFM is to avoid any further over-allocation of fresh water and phase out existing over-allocation. Giving effect to this directive objective has been an important part of the TANK groups considerations in the preparation of Change 9 and has resulted in Policy 41 and Schedule 6 reducing water take allocations from the existing in some instances.

Objective B3 is to improve and maximise the efficient allocation and efficient use of water. Change 9 policies 42 and 43 specifically seek to achieve this NPSFM objective and are implemented through the matters for discretion in the TANK water take rules.

Objective B4 of the NPSFM is to protect significant values of wetlands and of outstanding freshwater bodies. The permitted activity conditions for rules TANK 5 or 6 include "the activity shall not cause changes to the flows or levels of water in any connected wetland." New ground and surface water takes are a discretionary activity under TANK 9 and will



therefore be considered having regard to the objectives and policies of Change 9 including policies 12 and 13 relating to wetland management.

Objective B5 of the NPSFM is: "To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quantity, within limits." This objective is given effect to by Change 9 recognising such matters in objective 13 (water quantity) and the allocation priority listed in policy 48.

Policy B1 of the NPSFM requires changes to regional plans to set environmental flows for freshwater management units in its region to give effect to the objectives in the NPSFM having regard to: the impacts of climate change; the connection between water bodies; and the connections between freshwater bodies and coastal water. Change 9, Policy 41 and Schedule 6 set minimum flows for each of the TANK freshwater management units.

Policy B2 of the NPSFM requires changes to regional plans to provide for the efficient allocation of fresh water to activities, within the limits set to give effect to Policy B1. Policy 42 of Change 9 seeks to ensure the efficient management of the allocation of water available for abstraction. Policy 42 is implemented by Schedule 6 including flow limits and allocations based on known security of supply and the associated TANK rules in regulating water takes.

Policy B3 of the NPSFM requires changes to regional plans to state criteria by which applications for approval of transfers of water take permits are to be decided, including to improve and maximise the efficient allocation of water. Change 9 includes policy 44 which sets out the considerations for the transfer of water take permits. It also includes new RRMP rules 62, 62a and 62b for regulating the transfer of water take permits within the TANK catchments.

Policy B4 of the NPSFM is: "By every regional council identifying methods in regional plans to encourage the efficient use of water." Change 9 objective 14, policies 42 and 43 and the matters of discretion in the TANK 7 and 8 all seek to ensure the efficient use of water takes.

Policy B5 of the NPSFM requires regional council decisions to prevent overallocation of water in a freshwater management unit. As discussed under objective B2 above, Policy 41 and Schedule 6 reduce water take allocations from the existing where the evidence suggests that the freshwater management unit is already overallocated.

Policy B6 of the NPSFM is: "By every regional council setting a defined timeframe and methods in regional plans by which overallocation must be phased out, ...." Policy 45 sets limits for permit duration to achieve this.



### 8.7.2.3 Regional Policy Statement (RPS)

Objective LW1 requires that *"Freshwater and the effects of land use and development are managed in an integrated and sustainable manner..."* The subclauses of Objective LW1 include the following matters that are relevant to the proposed TANK water take provisions:

- 2. the maintenance of the overall quality of freshwater within the Hawke's Bay region and the improvement of water quality in water bodies that have been degraded to the point that they are over-allocated;
- 2B. establishing where over-allocation exists, avoiding any further over-allocation of freshwater and phasing out existing over-allocation;
- 4. Safeguarding the life supporting capacity and ecosystem processes of freshwater, including indigenous species and their associated freshwater ecosystems;
- 5. Recognising the regional value of fresh water for human and animal drinking purposes, and for municipal water supply;
- 6. Recognising the significant regional and national value of fresh water use for production and processing of beverages, food and fibre;
- 9. Ensuring efficient allocation and use of water;

Objective LW2 'Integrated management of freshwater and land use development' relates to balancing the multiple and competing values within catchments. It requires regional plans to provide clear priorities for the protection and use of those freshwater resources where significant conflict and competing values exist. Change 9 policies 46 and 48 seek to prioritise activities for water allocation within the TANK catchments in giving effect to this RPS objective.

Policy LW1 seeks to implement the above objectives through 'catchment based integrated management'. Of relevance to the water take provisions, clause (1) of this policy requires the adoption of an approach for each catchment area that:

- 1.b) provides for mātauranga a hapū and local tikanga values and uses of the catchment;
- 1.c) provides for the inter-connected nature of natural resources within the catchment area, including the coastal environment;
- 1.cA) recognises and provides for the need to protect the integrity of aquifer recharge systems;
- 1.f) takes a strategic long term planning outlook of at least 50 years to consider the future state, values and uses of water resources for future generations;
- 1.g) aims to meet the differing demand and pressures on, and values and uses of, freshwater resources to the extent possible;
- 1.iE) recognises and provides for existing use and investment;



- 1.j) ensures efficient allocation and use of freshwater within limits to achieve freshwater objectives; and

The water take provisions in Change 9 seek to achieve all of the above in the integrated management of the TANK catchments.

Clause 2 of Policy LW1 states that when preparing regional plans to achieve freshwater objectives that the following shall be set:

- d) ii) groundwater and surface water quantity allocation limits and targets and minimum flow regimes; and
- e) how the groundwater and surface water quality and quantity limits and targets will be implemented through regulatory or non-regulatory methods including specifying timeframes for meeting water quality and allocation targets.

The water quantity allocation limits and targets and minimum flow regimes are set through Change 9 policy 41, schedule 6 and the associated TANK rules. Timeframes for allocation targets are addressed through permit duration which is set out in policy 45.

Clause 3 of Policy LW1 states that when setting objectives ensure:

- a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water are safeguarded; and
- b) adverse effects on water quantity and water quality that diminish mauri are avoided, remedied or mitigated; and...

The water take provisions in Change 9 will help achieve RPS policy LW1(3).

Clause 4 of Policy LW1 states to achieve the limits and targets required by Policy LW1.2(e) have regard to:

- a) allowing reasonable transition times and pathways to meet any new water quantity limits or new water quality limits included in regional plans. A reasonable transition time is informed by the environmental and socio-economic costs and benefits that will occur during that transition time, and should include recognition of the existing investment; and
- b) promoting and enabling the adoption and monitoring of industry-defined and Council approved good land and water management practices.

These matters are considered in the Change 9 provisions in the setting of permit duration (policy 45) and the policies requiring efficiencies of water use (policies 42 and 43).

Policy LW2 includes:

- ...1. Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3: a) Greater Heretaunga / Ahuriri Catchment Area;...



3. When managing the freshwater bodies...: a) recognise and provide for the primary values and uses identified in Table 1;...

The primary values for the TANK catchments, which in Table 1 are referred to as the Greater Heretaunga / Ahuriri Catchment Area, include values that are relevant to the water take provisions of Change 9, these being:

- Any regionally significant native water bird populations and their habitats
- Cultural values and uses for: mahinga kai, nohoanga, taonga raranga and taonga rongoa
- Fish passage
- Individual domestic needs and stock drinking needs
- Industrial & commercial water supply
- Native fish habitat in the Ngaruroro River and Tutaekuri River catchments
- Recreational trout angling and trout habitat in:
  - The Mangaone River
  - The Mangatutu Stream
  - The Ngaruroro River and tributaries upstream of the Whanawhana cableway
  - The Ngaruroro River mainstem between the Whanawhana cableway and confluence with the Maraekakaho River
  - The Tutaekuri River mainstem above the Mangaone River confluence
- The high natural character values of the Ngaruroro River and its margins upstream of Whanawhana cableway including, Taruarau River
- The high natural character values of the Tutaekuri River and its margins above the confluence of and including, the Mangatutu Stream
- Trout spawning habitat
- Freshwater use for beverages, food and fibre production and processing and other land based primary production.

The following amendments resulting from Change 5 to other RRMP objectives and policies are also relevant to the water take provisions of Change 9:

*OBJ 25 The quantity of water in wetlands, rivers and lakes is suitable for sustaining aquatic ecosystems, for achieving other freshwater objectives, and ensuring resource availability for a variety of purposes across the region, while recognising the impact caused by climatic fluctuations in Hawke's Bay.*

### 8.7.3 Relevant Objectives of Change 9

Given the statutory context provided above, the relevant objectives to these provisions cover the following issues: water quantity; taking and use of freshwater; providing for the values of mauri and ecosystem health and natural character. Therefore, the evaluation of



the appropriateness of the provisions should be against the following relevant Change 9 objectives: 1, 3, 5, 6, 7, 8, 9, 10, 13, 14, 15 and 16 (see section 7.2 above). Two of these objectives are specific to water quantity and therefore the water take provisions and for convenience are quoted as follows:

**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 water allocation in the following priority order:*

- a) Water for the essential needs of people;*
- b) The allocation and reservation of water for domestic supply including for marae and papakainga, and for municipal supply so that existing and future demand as described in HPUDS (2017) can be met within the specified limits;*
- c) primary production on versatile soils;*
- d) other primary production food processing, industrial and commercial end uses;*
- e) other non-commercial end uses so that;*
- f) The development of Māori economic, cultural and social well-being is supported through the regulating the use and allocation of the water available at high flows for taking, storage and use;*
- g) Water is available for abstraction at agreed reliability of supply standards;*
- h) Water use is efficient;*
- i) 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 efficiency, and innovations in technology and management;*
- b) flexible water allocation and management regimes;*
- c) water reticulation;*
- d) aquifer recharge and flow enhancement*
- e) water harvesting and storage*

#### 8.7.4 Overview of Practicable Options

The status quo regulation applying to ground and surface water takes and the transfer of permits is summarised in Table 35 below compared to the proposed equivalent provisions in Change 9.

**Table 42 – Comparison of Current and Proposed Water Take and Transfer of Permit Provisions**



Activity	Existing RRMP	Proposed Change 9
Ground Water Takes	<p>The following rules apply generally across the region.</p> <p><b>Rule 53</b> Minor takes and uses of groundwater. <b>Permitted Activity</b> if conditions complied with including the volume taken shall not exceed 20m<sup>3</sup>/day per property; the rate of take shall not exceed 10 litres a second; the take shall not adversely affect any other lawfully established and efficient water take; the take shall not adversely affect any wetland; and a backflow prevention device shall be installed.</p> <p><b>Rule 55</b> water takes which do not comply with rule 53 – <b>Discretionary Activity</b>. The Groundwater Quantity objective, policy and guidelines in Chapter 5.7 are relevant to consider for discretionary activity applications and include:</p> <p>OBJ 44 The maintenance of a sustainable groundwater resource.</p> <p>Pol 77 Environmental Guidelines – Groundwater Quantity:</p> <p>(a) To manage takes of groundwater to ensure abstraction does not exceed the rate of recharge.</p> <p>(b) To manage the available groundwater resource to ensure supplies of good quality groundwater.</p> <p>(c) To manage the groundwater resource in such a manner that existing efficient groundwater takes are not disadvantaged by new takes.</p> <p>(d) To manage takes of groundwater to ensure abstraction does not have an adverse effect on rivers, lakes, springs, or wetlands.</p>	<p>Rule <b>TANK 6</b> – The take and use of groundwater in the TANK Water Management Zones – <b>Permitted Activity</b> if conditions complied with including the volume taken shall not exceed 5m<sup>3</sup>/day per property (except existing (at specified date) permitted takes of up to 20m<sup>3</sup>/day may continue) ; the rate of take shall not exceed 10 litres a second; the take shall not adversely affect any other lawfully established and efficient water take; the take shall not cause changes to flows and levels of any connected wetland; and backflow shall be prevented.</p> <p>Rule <b>TANK 7</b> – Re-application for water permits – groundwater – <b>Restricted Discretionary Activity</b> if conditions complied with including those relating to the actual and reasonable use; stream flow depletion and enhancement; and that a water meter is installed.</p> <p>Rule <b>TANK 9</b> – The take and use of... groundwater not complying with TANK 6 or 7 – <b>Discretionary Activity</b> if conditions met including the take does not result in the total allocation limit in the management zone specified in Schedule 6 being exceeded.</p> <p>Rule <b>TANK 10</b> makes water takes not complying with the conditions of TANK 9 a <b>Non-Complying Activity</b>.</p> <p><b>Schedule 6</b> – Specifies an allocation limit for both Ngaruroro and Tūtaekurī groundwater of 'existing use only' and for the Heretaunga Plains Water Management Unit an 'interim allocation of 90Mm<sup>3</sup> per year – existing use only'.</p>



Surface Water Takes	<p>The following rules apply generally across the region.</p> <p><b>Rule 54</b> Minor takes and uses of surface water except for within 'water short' catchments identified in Schedule 6.</p> <p><b>Permitted Activity</b> if conditions complied with including the volume taken shall not exceed 20m<sup>3</sup>/day per property (except for takes occurring for a period of less than 4 weeks); the rate of take shall not exceed 10% of the instantaneous flow at the point of intake; the intake velocity shall not exceed 0.3m/s; the activity shall not adversely affect any wetland; and the take shall not adversely affect any other lawfully established and efficient water take.</p> <p><b>Rule 55</b> water takes which do not comply with rule 54 – <b>Discretionary Activity</b>. The Surface Water Quantity objective, policy and guidelines in Chapter 5.5 are relevant to consider for discretionary activity applications and include:</p> <p>OBJ 41 The maintenance of the water quantity of specific rivers in order that the existing aquatic species and the natural character are sustained, while providing for resource availability for a variety of purposes, including groundwater recharge.</p> <p>Pol 73 Environmental Guidelines – Surface Water Quantity:</p> <p>(a) ... establishing a minimum flow in a river as that level which will maintain the existing ecosystem.</p> <p>(b) ... where minimum flows have been established, all takes for which a resource consent is required will be required to cease when the river is flowing at or below the minimum flow. Except that ... the provision of drinking water to people or animals ... restricted to the level</p>	<p>Rule <b>TANK 5</b> – The take and use of surface water in the TANK Water Management Zones – <b>Permitted Activity</b> if conditions complied with including: the take is not from specified streams or the Lake Poukawa Water Management Zone; the take does not exceed 5m<sup>3</sup>/day per property (except existing (at specified date) permitted takes of up to 20m<sup>3</sup>/day, and existing takes to meet the needs of animals for drinking water may continue) ; takes occurring for a period of less than 28 days shall not exceed 200m<sup>3</sup> per day in any 7 day period; the take does not cause any stream or river flow to cease; fish including eels shall be prevented from entering the reticulation system; the take shall not adversely affect any other lawfully established and efficient water take; the take shall not cause changes to flows and levels of any connected wetland.</p> <p>Rule <b>TANK 8</b> – Re-application for water permits – surface water – <b>Restricted Discretionary Activity</b> if conditions complied with including those relating to the actual and reasonable use and surface water management; that a water meter is installed; that fish and eels are prevented from using the reticulation system unit quantity.</p> <p>Rule <b>TANK 9</b> – The take and use of surface water (low flow allocations) not complying with TANK 5 &amp; 8 – <b>Discretionary Activity</b> if conditions met including the take does not result in the total allocation limit in the management zone specified in Schedule 6 being exceeded.</p> <p>Rule <b>TANK 10</b> makes water takes not complying with the conditions of TANK 9 a <b>Non-Complying Activity</b>.</p>
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	<p>necessary to maintain human or animal welfare.</p> <p>(c) ... the total allocation authorised ...does not result in authorised takes being apportioned, restricted or suspended for more than 5% of the time on average during November-April.</p> <p>(d) To sustain the natural character of the surface water body when determining the minimum flows and allocatable volumes for surface water bodies in Table 9.</p> <p>Table 9 sets minimum flows and allocatable volumes for various rivers (including a number within the TANK catchments). See Table 43 below for a comparison of the RRMP flows and volumes with those for the equivalent rivers in Change 9, Schedule 6.</p>	<p><b>Schedule 6</b> – Specifies minimum flows and allocation limits surface water bodies within the Ahuriri, Karamu / Clive River, Ngaruroro River and Tūtaekurī River Management Units.</p>
Transfer of Permits	<p>The following rules apply generally across the region.</p> <p><b>Rule 61</b> the transfer of a permit to take and use surface water from a river to another site – <b>Controlled</b> provided conditions are met which include: a) being within the same stream management zone where flow is not significantly lesser; b) shall not result in any reduction in surface water recharge; c) shall not adversely affect any lawfully established water abstraction; and d) no increase in adverse effects on aquatic ecosystems or fish passage.</p> <p><b>Rule 62</b> the transfer of a permit to take and use groundwater to another site – <b>Controlled</b> provided conditions are met which include: a) being within the same aquifer; b) location where aquifer has the same or greater aquifer transmission and storage characteristics; c) shall not adversely affect any lawfully established</p>	<p>The following proposed new rules would only apply within the TANK catchments.</p> <p><b>New Rule RRMP 62a</b> Transfer of Permits to Take and Use Water – <b>Controlled</b> subject to conditions including: the transfer is not between ground and surface water; the permit is within the same catchment to any point downstream; the transfer is within the same Freshwater Management Unit (Quantity); transfer of groundwater is to an existing bore with no change to the drawdown effects on neighbouring bores; does not result in an increase in nitrogen loss; if over allocated the transfer shall only be for that part of the permit where there is actual and reasonable use; and the purpose of the water use does not change.</p> <p><b>New Rule RRMP 62b</b> Transfer of Permits to Take and Use Water –</p>



efficient groundwater abstraction; and d) transfer shall not cause any reduction .

**Discretionary** where does not comply with RRMP 62a. t

A significant difference with the proposed Change 9 rules is that the permitted activity rules are tightened for both groundwater and surface water takes from a maximum limit of 20m<sup>3</sup>/day per property to a maximum of 5m<sup>3</sup>/day per property. There is also a greater activity status hierarchy proposed with the TANK rules compared to the existing RRMP which only has permitted and discretionary categories for water take provisions. The TANK rule structure includes a restricted discretionary activity category for re-application of existing permits, discretionary status for where the permitted and restricted discretionary activity rules cannot be complied with and a non-complying activity category for applications seeking water takes beyond the allocation limits in schedule 6.

Specific transfer of permit rules are proposed to be introduced for the TANK catchments through Change 9 with more specific conditions including the transfer only applying to actual and reasonably used volumes of the permit and not being used for activities that will increase nitrogen loss.

**Table 43 – Comparison of RRMP and TANK Provisions – Allocation Flows and Volumes**

River	RRMP minimum flow (litres / second)	RRMP allocation limit (litres / second)	TANK minimum flow (litres / second)	TANK allocation limit (litres / second)
Ahuriri catchment surface water	NA	NA	NA	Existing use only
Awanui	35	0	120 l	Not to exceed 30
Kaweawera / Paritua	75	0	120	Not to exceed 30
Ongaru	5	0	120	Not to exceed 30
Irongate	100	0	100	Not to exceed 30
Louisa Stream	30	0	30	Not to exceed 30



Te Waikaha Stream	25	0	25	Not to exceed 30
Mangaterere Stream	100	0	100	Not to exceed 30
Karamu River	1,100	29.8	1,100	Not to exceed 30
Raupare Stream	300	138.6	300	70
Lake Poukawa surface water	NA	NA	NA	Existing Use only
Maraekakaho River	100	9	109	36
Tūtaekurī Waimate	1,200	607	1,200	607
Ngaruroro River	2,400	1,581	2,400	1,300
Mangatutu Stream	NA	NA	3,800	120
Mangaone River	NA	NA	2,500	140
Tūtaekurī River	2000	1,536	2,500	1,140

*To add explanation of differences between RRMP and TANK limits...*

#### Surface Water Takes

*General (to complete explanation of other options considered and rationale for Change 9 provisions)*

*Ngaruroro River (to complete explanation of other alternative low flow and allocation limits considered)*

*Tūtaekurī River (to complete explanation of other alternative low flow and allocation limits considered)*

*Other surface water bodies (to complete explanation of other alternative low flow and allocation limits considered)*



Ground Water Takes

(to complete explanation of other alternative allocation limits considered)

Transfer of Permits

(to complete)

**Table 44–Water Take Policies in Change 9**

Due to the number of policies relevant to this section, the key policies for setting the regulatory direction are quoted in full with only a portion of the remaining policies listed.

Ref	Policy / Policy Summary
Policy 36.	<p>The Council recognises the actual and potential adverse effects of groundwater abstraction in the Heretaunga Plains Water Management Zone on;</p> <ul style="list-style-type: none"> <li>a) groundwater levels and aquifer depletion;</li> <li>b) flows in connected surface waterbodies;</li> <li>c) flows of the Ngaruroro River;</li> <li>d) groundwater quality through risks of sea water intrusion and water abstraction;</li> </ul> <p>and will carry out the following management steps to avoid further adverse effects;</p> <ul style="list-style-type: none"> <li>e) adopt a groundwater allocation limit of 90 Mm 3 per year;</li> <li>f) restrict any new allocations of groundwater</li> <li>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);</li> <li>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;</li> <li>(i) allocate groundwater for the annual or seasonal water demand;</li> <li>(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;</li> <li>(iii) allocate water for irrigation based on a reliability standard that meets demand 95% of the time;</li> <li>(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.</li> <li>(v) take into account practical and economic realities of constructing and completing existing major developments over time, including in relation to market fluctuations and the timing and availability of finance for staged developments.</li> </ul>
Policy 37.	<p>The Council will re-allocate water to holders of permits to take and use water in the Heretaunga Water Management Zone issued before the &lt;plan notification date&gt; according to the new plan policies and rules either;</p> <ul style="list-style-type: none"> <li>a) upon expiry of the consent; or</li> </ul>



b) in accordance with a review of all applicable permits within ten years of <the operative date>;  
whichever is the sooner.

- 
- Policy 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) Regulating water takes and enabling consent applicants to either
    - (i) Develop or contribute to stream flow and habitat enhancement schemes that;
      - 1. improve stream flows in lowland rivers where groundwater abstraction is depleting stream flows and;
      - 2. improve oxygen levels and reduce water temperatures;
    - Or
    - (ii) Be subject to water take restrictions when an applicable flow trigger is reached and to;
  - b) Support and contribute to the design and management of the stream flow enhancement regime by permit holders either individually or collectively;
  - c) assess the contribution to stream depletion from groundwater takes; and
  - (i) require stream depletion to be off-set equitably by consent holders 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.
- 
- Policy 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 ...a water storage and release scheme ...;
  - b) ... to develop options for funding, construction and operation of such a scheme ...; and
  - c) ... to review alternative methods ....
- 
- Policy 40. Groundwater Management Review... 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 ... in accordance with Section 79 of the RMA and will determine; ...
- 
- Policy 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 Tūtaekurī River;

- e) increasing the minimum flow for the Tūtaekurī 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 Tūtaekurī 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 Tūtaekurī 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
- l) requiring water meters to be installed for all water takes authorised by a water permit and water use to be recorded and reported via telemetry provided that telemetry will not normally be required where the consented rate of take is less than 5l/sec or where there are technical limitations to its installation.
- 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 an applicable 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 an applicable lowland stream enhancement;  
and
- (iii) allowing further technical assessments to determine the extent of stream depletion effect.



- Policy 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 ...;
- 
- Policy 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: ...
  - b) Using the IRRICALC water demand model if available ...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 ...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 ongoing efficient water use ...
- 
- Policy 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.
  - h) enabling the transfer of a point of take and change of water use to municipal water supplies, including for marae and papakainga, (not including transfer to industrial uses above 15m<sup>3</sup>/day) from any other use for the efficient delivery of water supplies and to meet



the communities' human health needs for water supply, provided adverse effects on existing water users can be avoided remedied or mitigated.

- 
- Policy 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 cumulative consented water takes within the water management zone and the Council will
- a) 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.
- b) may grant consents granted within three years prior to the relevant common catchment expiry date 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).
- c) will impose a consent duration for municipal supply consistent with the most recent HPUDS and will impose consent review requirements that align with the expiry of all other consents in the applicable management unit.
- 
- Policy 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 15m<sup>3</sup>/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;
  - b) 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 there has been a review of the allocation limits within this plan.
- 
- Policy 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 ... estimates provided by the HPUDS (2017) to 2045
  - b) calculate water demand according to existing and likely ...demand within the expected reticulation areas and
  - (i) require that water demand and supply management plans are developed and adopted ...
  - (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...
  - c) work collaboratively with Napier City and Hastings District Councils ...
- 



Policy 48	<p>When making water shortage directions under Section 329 occurring when rivers have fallen below minimum flows and water use has decreased or ceased according to permit conditions, the Council will establish and consult with an emergency water management group that shall have representatives from Napier City and Hastings District Councils, NZ Fire Service, DHB, iwi and MPI, to make decisions about providing for water uses in the following priority order;</p> <ul style="list-style-type: none"> <li>a) water for the maintenance of public health;</li> <li>b) water necessary for the maintenance of animal welfare</li> <li>c) water essential for community well-being and health.</li> <li>d) Water essential for survival of horticultural tree crops</li> <li>e) uses where water is subject to seasonal demand for primary production</li> <li>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</li> </ul> <p>The following uses will not be authorised under a water shortage direction:</p> <ul style="list-style-type: none"> <li>g) use of water uses not associated with the continued operation of a business or community wellbeing;</li> <li>h) non-essential amenity uses such as private swimming pools and car washing</li> </ul> <p>Takes not subject to any restrictions are:</p> <ul style="list-style-type: none"> <li>i) firefighting uses;</li> <li>j) non-consumptive uses;</li> </ul>
Policy 49	<p>The Council will phase out overallocation by;</p> <ul style="list-style-type: none"> <li>a) Preventing any new allocation of water ...;</li> <li>b) For applications in respect of existing consents due for expiry or when reviewing consents, to; <ul style="list-style-type: none"> <li>(i) allocate water according to demonstrated actual and reasonable need and history of use within the 10 years...</li> <li>(ii) impose conditions that require efficiency gains to be made, ...;</li> <li>(iii) take into account practical and economic realities of constructing and completing major developments over time, ...</li> </ul> </li> <li>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;</li> <li>d) reducing the amount of water permitted to be taken without consent, including those provided for by s14 (3)(b) of the RMA, ...;</li> <li>e) encouraging voluntary reductions, site to site transfers (subject to clause (f)) or promoting water augmentation/harvesting;</li> <li>f) ensuring site to site transfers will only be consented where the water use is demonstrated by accurate water or land use records</li> <li>g) Prevent site to site transfers of allocated but unused water;</li> <li>h) enabling and supporting permit holders to develop flexible approaches to management and use of allocatable water ... including through catchment collectives, water user groups, consent sharing or global water permits;</li> <li>i) enabling and supporting the rostering of water use or reducing the rate of takes in order to avoid restrictions at minimum or trigger flows;</li> </ul>
Policy 50	<p>When considering applications for resource consent to take water for frost protection, the Council will avoid, remedy or mitigate actual and potential effects of the take on its own or in combination with other water takes;...</p>



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8.7.5 Assessment of Efficiency and Effectiveness of the Water Take Provisions

The assessment of the changes to the policies, rules and other methods under sections 32(1)(b) and (2)(a) of the Act, is provided in Table 45 below. The new policies, rules and other methods (Schedule 6 ) included in this plan change are set out under Table 44 above and assessed for their appropriateness in achieving the objectives of the Plan Change below.

Table 45- Assessment of the Water Take Provisions under sections 32(1)(b)(ii) and (iii), 32(2) (a) and (b) and 32(3) of the Act

Theme, Provisions and Summary of Provisions	Assessment Under RMA Section 32(2)		Assessment under RMA Section 32(1)(b)
	Environmental, Economic, Social and Cultural Benefits	Environmental, Economic, Social and Cultural Costs	Having regard to the appropriateness of the provisions by assessing their efficiency and effectiveness in achieving the objectives
Theme: Groundwater Takes	(to complete)	(to complete)	(to complete)
Provisions: Policies 36 – 40, 42, 43 and 45 – 50; Rules TANK 6, 7, 9 and 10; and Schedule 6.			
Summary of Provisions:			
Policies 36 – 40 ... (to complete)			
Rule TANK 6 ... (to complete)			
Schedule 6 sets low flow and water take allocation limits.			



Theme: Surface Water Takes	(to complete)	(to complete)	(to complete)
Provisions: Policies 41 – 43 and 45 – 50; Rules TANK 5, 8, 9 and 10; and Schedule 6.			
Summary of Provisions:			
Policy 41 ....(to complete)			
Rule TANK 5 ...(to complete)			
Schedule 6 sets low flow and water take allocation limits.			
Theme: Transfer of Permits	(to complete)	(to complete)	(to complete)
Provisions: Policy 44; and Rules RRMP 62a and 62b.			
Summary of Provisions:			
Policy 44 ....(to complete)			
Rule RRMP 62a ...(to complete)			

Still to complete



#### 8.7.6 Risk of Acting or Not Acting

*Still to complete*

#### 8.7.7 Conclusion

*Still to complete*

### 8.8 SOURCE PROTECTION ZONE PROVISIONS

#### 8.8.1 Introduction

This section of the report evaluates the provisions relating to the protection of the source water of 'Registered Drinking Water Supplies'. The term, registered drinking water supplies, is referred to in the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 (the 'Drinking Water NES') as set out in section 3.5.1 of this report above. A definition of this term is provided in the Drinking Water NES as follows:

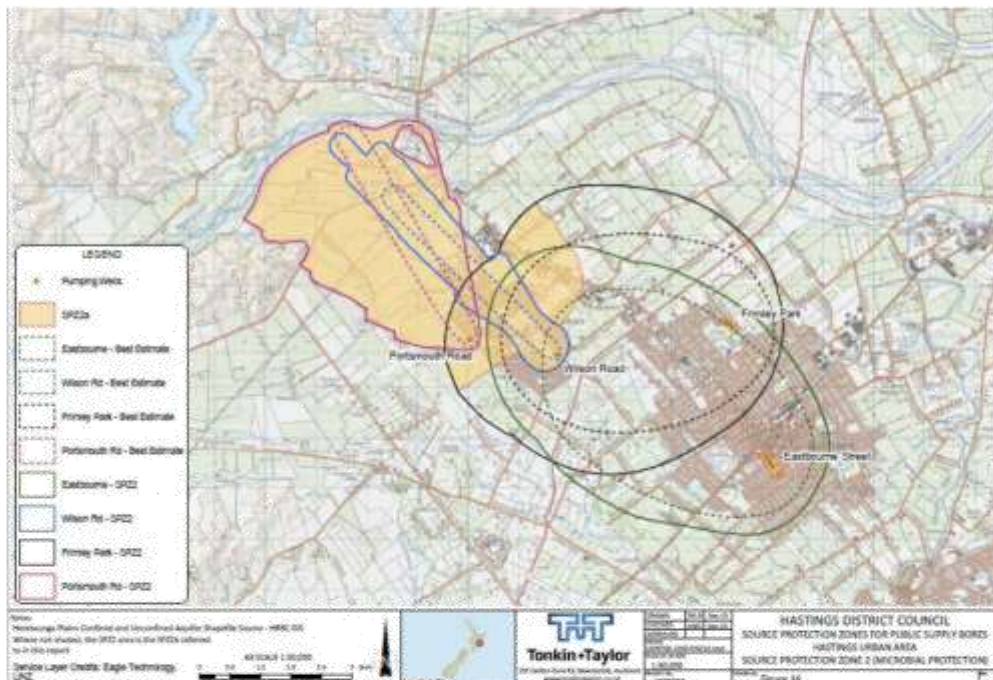
*registered drinking-water supply means a drinking-water supply that is recorded in the drinking-water register maintained by the chief executive of the Ministry of Health (the Director-General) under section 69J of the Health Act 1956.*

The proposed provisions in Change 9 refer to a 'Source Protection Zone'. The SPZ for the Hastings Urban Area registered drinking water supply has been mapped in a report by Tonkin & Taylor<sup>113</sup>. Although there are options available as to which map boundaries from that report are the most appropriate in defining the SPZ for the purposes of the Change 9 provisions.

<sup>113</sup> Source Protection Zones for Public Supply Bores – Hastings Urban Area. Tonkin & Taylor Ltd, October 2018 (Figure 14).



**Figure 4 – Tonkin & Taylor Recommended SPZ for Hastings Urban Water Supply Bores – Microbial Protection**



Based on Figure 4 above the SPZ for the Hastings Urban water supply would be defined by the outer edge of the combined solid lines, which are based on the area within which there is a risk of microbial infection of the source water. Due to the overlapping nature of the lines there would be some areas within the SPZ of multiple bores, however any area inside a solid line would be within the SPZ and subject to the relevant provisions of Change 9.

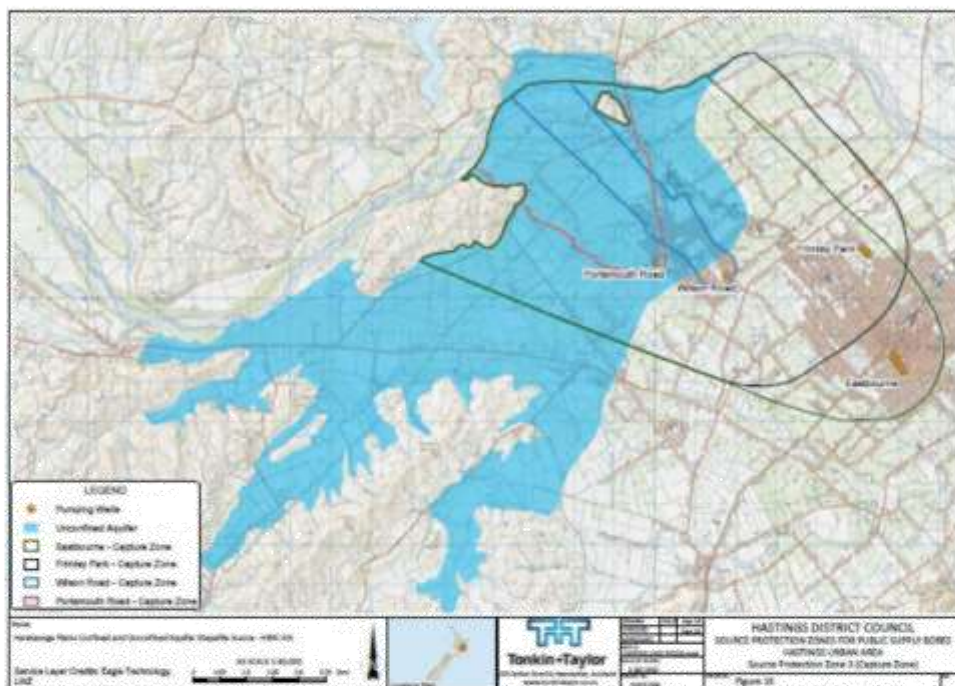
There are also other options to apply the rules less conservatively to only the yellow shaded (SPZ2a) portions of the map, which represents the area of greatest risk of microbial contamination.

There is also a more conservative option based on the Tonkin & Taylor SPZ3 map shown in Figure 5 below, where the outer of the green and black solid lines would define the edge of the SPZ. This defines a capture zone of where source water quality reaching the HDC bores could be at risk from other non-microbial contamination considering 30 year



travel times and groundwater flow paths<sup>114</sup>. The matter of the most appropriate SPZ boundary to use is discussed further in the options assessment below.

**Figure 5 - Tonkin & Taylor Recommended SPZ for Hastings Urban Water Supply Bores – Capture Zone**



Specific SPZs for the Napier and Clive registered drinking water supplies (which both serve over 500 people) are still to be defined. In the interim however a default 2km radius (Provisional Protection Zones - PPZ) from the water supply bores has been put forward by the Havelock North Joint Working Group on Drinking Water Safety (JWG), in their capacity as a working committee of TANK.

At the time of writing, it is understood that there is ongoing work in the defining of the SPZs including the defining of a specific SPZ for the Napier municipal water supply bores. This assessment therefore focusses on the proposed provisions to be applied within the defined SPZ's rather than the definition of the SPZ boundaries which will appropriately be based on the best science available. Some assessment is however provided on which may be the best of the Tonkin & Taylor boundary options to use.

<sup>114</sup> Ibid (Page 19).



The provisions evaluated in this section include both the rules in Change 9 that seek to amend existing rules in the RRMP to specifically protect water within SPZ's from the effects of land use activities, water takes and discharges (these being RRMP Rules 1, 2, 3, 5, 6, 12, 13, 14, 15, 16, 37, 40, 48 & 49); and any provisions within the new rules proposed as part of Change 9 that seek to provide such protection (these being TANK Rules 1, 2, 3, 4, 7 & 8 and STORMWATER 2, 3 and 4). The direction for these rules is provided by proposed policies 6, 7 and 8.

## 8.8.2 Statutory Context

### 8.8.2.1 Resource Management Act 1991 (RMA)

The Board of Inquiry into the 'Havelock North Drinking Water Contamination Event', in their Stage 2 Report<sup>115</sup>, concluded that the protection of source water is included in the section 5 ('Purpose of the Act'<sup>116</sup>), principally through provisions relating to protection of people and communities' health and safety, but noted<sup>117</sup> that source water protection was an implicit rather than explicit requirement.<sup>118</sup>

### 8.8.2.2 National Policy Statement for Freshwater Management 2014 (NPSFM)

The NPSFM (as summarised in section 3.4.1 of this report above) requires values and attributes to be assigned to Freshwater Management Units (FMUs) by engagement with the community including tangata whenua. The NPSFM includes two compulsory values, ('ecosystem health' and 'human health for recreation') and a list of optional 'other national values' that may be assigned to FMUs, including:

*Water supply – The freshwater management unit can meet people's potable water needs. Water quality and quantity would enable domestic water supply to be safe for drinking with, or in some areas without, treatment.*

As set out in section 3.7 above, Change 5 of the RPS sets out primary values and uses for the freshwater bodies listed in Table 1 of that document. The TANK catchments are within the 'Greater Heretaunga / Ahuriri Catchment Area' of Table 1, the primary values of which include:

- *Individual domestic needs and stock drinking needs; and*
- *Urban water supply for cities, townships and settlements and water supply for key social infrastructure facilities...*

<sup>115</sup> Report of the Havelock North Drinking Water Inquiry: Stage 2, Government Inquiry into Havelock North Drinking Water, December 2017

<sup>116</sup> See section 5 quoted in section 3.1.1 above.

<sup>117</sup> Ibid, paragraph 613

<sup>118</sup> Drinking Water Source Protection – Draft Regulatory Provisions for TANK Catchments – Draft for Discussion, Good Earth Matters, June 2018, (page 5).



### 8.8.2.3 Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 (Drinking Water NES)

The relevance of the Drinking Water NES is summarised under section 3.5.1 of this report above, including regulation 10 'Limitations on permitted activity rules for activities upstream of abstraction points.' Regulation 10 prevents a rule from being included in a regional plan allowing a permitted activity upstream of an abstraction point where the drinking water meets health quality criteria, unless satisfied that the activity is not likely to result in the water not meeting that criteria or aesthetic guideline values after existing treatment.<sup>119</sup> Regulation 9 states that:

*Regulation 10 only applies to an activity that has the potential to affect a registered drinking-water supply that provides no fewer than 501 people with drinking water for not less than 60 days each calendar year.*

Regulation 13 states that a regional plan may include rules that are more stringent than the NES. Regulation 10 therefore sets a minimum standard for drinking water source protection.

### 8.8.2.4 Regional Policy Statement (RPS)

As set out in section 3.7 above, Change 9 is required to give effect to the RPS, Change 5 of which includes Policy LW2:

*...1. Give priority to maintaining, or enhancing where appropriate, the primary values and uses of freshwater bodies shown in Table 1 for the following catchment areas in accordance with Policy LW2.3: a) Greater Heretaunga / Ahuriri Catchment Area;...*

*3. When managing the freshwater bodies listed in Policy LW2.1: a) recognise and provide for the primary values and uses identified in Table 1;...*

The primary values for the TANK catchments, which in Table 1 are referred to as the Greater Heretaunga / Ahuriri Catchment Area, include 'Urban water supply for cities, townships and settlements and water supply for key social infrastructure facilities'.

Another reference to drinking water supply in the RPS change 5 is within objective OBJ LW 1 'Integrated management of fresh water and land use and development':

*Freshwater and the effects of land use and development are managed in an integrated and sustainable manner which includes:...*

*5. recognising the regional value of fresh water for human and animal drinking purposes, and for municipal water supply; ...*

The existing RPS includes the following relevant objectives to drinking water source protection, from section 3.8 'Groundwater Quality':

<sup>119</sup> Drinking Water NES Regulation 10(1).



*Objective 21 – No degradation of existing groundwater quality in the Heretaunga Plains and Ruataniwha Plains aquifer systems.*

*Objective 22 – The maintenance or enhancement of groundwater quality in aquifers in order that it is suitable for human consumption and irrigation without treatment, or after treatment where this is necessary because of the natural water quality.<sup>120</sup>*

### 8.8.3 Relevant Objectives of Change 9

Given the statutory context provided above, including the specific requirements of the Drinking Water NES, it is those objectives relevant to the protection of the sources of registered drinking water supplies serving over 500 people, that are relevant to the proposed Source Protection Zone provisions. Such registered drinking water supplies within the TANK catchments are all based on ground water takes. Therefore, the evaluation of the appropriateness of the provisions should be against the following relevant Change 9 objectives:

#### Objective 1:

*When setting objectives, limits and targets;*

- a) Te Mana o te Wai<sup>121</sup> 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 waterbody values listed in Table 1 (RPS) are provided for.*

#### 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, using damming and diverting of freshwater is carried out in the **Groundwater** connected to the Ngaruroro, Tutaekuri and Karamu rivers and their tributaries so that the mauri, water quality, water quantity and groundwater levels are maintained to enable;*

<sup>120</sup> This is the modified version of OBJ 22 as per Change 5 (Updated as at 27 March 2015).

<sup>121</sup> From Objective AA and Policy AA in NPSFM



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

**Objective 13:**

*Subject to limits, targets and flow regimes established to meet the needs of the values for the waterbody, 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) Water is available for abstraction at agreed reliability of supply standards;*
- e) Water use is efficient;*
- f) Allocation regimes are flexible and responsive, allowing water users to make efficient use of this finite resource;*

**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 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.*

**8.8.4 Overview of Reasonably Practicable Options**

A report was commissioned by the JWG from Good Earth Matters, titled *Drinking Water Source Protection – Draft Regulatory Provisions of TANK Catchments*, 14 June 2008 (the GEM Report). The purpose of the GEM Report was to provide recommendations on source protection provisions within the RMA regulatory framework and to develop draft policies and rules for the JWG's recommendation to TANK<sup>122</sup>. This report provided a comprehensive summary of the relevant information and statutory criteria to be considered in the formulation of SPZ provisions and should be referred to for a full background of the relevant matters in establishing such provisions.

The GEM Report includes at section 5, 'Options for Hawke's Bay Regional Planning Framework'. The options discussed in the GEM Report include status quo and non-regulatory options as well as an option involving new rules. The non-regulatory options involving the addition of a specific drinking water source protection objective and policy, and mapped SPZs to clarify where the objective and policy are applicable, along with the option of maintaining the status quo are discussed as follows as part of the assessment of section 32(1)(b)(i) of the RMA:

*identifying other reasonably practicable options for achieving the objectives;*

**8.8.4.1 Option 1 - Status Quo**

In assessing practicable options reference should generally be given to the status quo, or 'do nothing option'. In regard to drinking water source protection that would be to not include any specific provisions in Change 9 and to therefore rely on the higher order RPS objectives and policies listed in section 8.7.2.4 above, and the relevant Change 9 objectives listed in section 8.7.3 above. These higher order objectives and policies would be able to be considered in the assessment of discretionary or non-complying activity resource consents. The ability to assess the effects of proposed activities on source water for drinking water supplies would therefore only be possible for activities that require

<sup>122</sup> *Drinking Water Source Protection – Draft Regulatory Provisions for TANK Catchments – Draft for Discussion*, Good Earth Matters, June 2018, (page 1).



discretionary or non-complying activity resource consent for some other reason, given that there are no existing rules triggering resource consent in relation to SPZs.

The GEM Report, in assessing the status quo option made the following conclusions<sup>123</sup>:

- It does not effectively implement the Drinking Water NES within the Hawke's Bay Region;
- It failed to provide effective source protection evidenced through the Havelock North Contamination Event and the subsequent findings of the Board of Inquiry;
- Identification of the Heretaunga Plains Unconfined Aquifer (HPUA) and applying a higher level of regulation to it in the RRMP is not sufficient to protect sources of registered drinking water as the HPUA only partially aligns with the SPZ boundaries as identified in the Tonkin & Taylor report for the Hastings Urban drinking water bores; and
- Several permitted activity rules within the RRMP do not meet the requirements of Regulation 10 of the Drinking Water NES.

Based on these findings, maintaining the status quo is not recommended in the GEM Report. It is considered that given the statutory context set out above<sup>124</sup>, and the findings of the GEM Report, the status quo option is not appropriate and need not be considered any further.

#### 8.8.4.2 Option 2 – Inclusion of Non-Regulatory Provisions

The GEM Report assessed the merits of two non-regulatory options:

- Option A – involving a new objective for source protection and a supporting policy to provide guidance and assessment criteria to assist applicants and decision makers in the preparation and consideration of resource consents<sup>125</sup>; and
- Option B – as per Option A but with the inclusion of SPZ maps. These maps would be included in order to inform implementation of the policy but would not have any effect on the status of activities in the rule framework<sup>126</sup>.

The assessment in the GEM Report, includes a table<sup>127</sup> which assesses the existing permitted activity rules of the RRMP against the Drinking Water NES Regulation 10. That is,

<sup>123</sup> Ibid (page 29).

<sup>124</sup> Section 66(1) RMA requires a regional plan to be prepared and changed in accordance with any regulations (which include the Drinking Water NES).

<sup>125</sup> *Drinking Water Source Protection – Draft Regulatory Provisions for TANK Catchments – Draft for Discussion*, Good Earth Matters, June 2018, (page 35).

<sup>126</sup> Ibid (page 37)

<sup>127</sup> Ibid (Table 5.1 pages 30 – 34)



to assess whether each rule could potentially permit an activity upstream (or upgradient for ground water<sup>128</sup>) of an abstraction point of a Registered Drinking Water Supply with effects that could cause the water source to not meet the drinking water health quality criteria or the aesthetic determinands guideline values. That assessment concludes that:

- the following RRMP rules would not meet Regulation 10: 5 Feedlots & Feedpads, 7 Vegetation Clearance, 12 Stock Feed, 13 Use of Compost, Biosolids & Soil Conditioners, 37 New Sewage Systems, 48 Discharge of Solid Contaminants to Land, and 49 Discharges to Land that may enter Water.
- Other rules where compliance with Regulation 10 is listed as 'unknown', include: 32 Discharge of Drainage Water, 33 Discharge of Bore Drilling Fluids, 35 Existing Sewage Systems, and the suite of rules relating to structures in the bed of rivers and lakes.

A word search of the RRMP Chapter 6 Rules confirms that that there are only two references to permitted activity conditions seeking to protect the source water for water supplies, these being in Rule 10 'Widespread application of agrichemicals' (which is a general reference to preventing 'any agrichemical being deposited on a roof of structure used as a catchment for water supply') and so does not protect ground water. The other is Tukituki River Catchment Rule TT1 'Production Land Use', which is not applicable within the TANK catchments. Given this, and the GEM Report assessment, it is reasonable to conclude that there are at least seven and possibly more, permitted activity rules within the RRMP, that do not meet regulation 10 of the Drinking Water NES.

Table 21 below provides a summary of the GEM Report findings on the non-regulatory options assessed<sup>129</sup>.

**Table 46 – Summary of GEM Report Findings of Non-Regulatory Options**

	Option A	Option B
Advantages	Makes consideration of source protection explicit in resource consent decision making process.	Same as A, plus provides spatial guidance as to where the objective and policy should be applied.
Disadvantages	No spatial guidance for when objective and policy should be applied.	Only influences activities that require resource consent under the current rules.

<sup>128</sup> Regulation 2, Drinking Water NES.

<sup>129</sup> *Drinking Water Source Protection – Draft Regulatory Provisions for TANK Catchments – Draft for Discussion*, Good Earth Matters, June 2018, (pages 45 & 46)



	Only influences activities that require resource consent under the current rules.	Does not satisfy the requirements of the Drinking Water NES, regulation 10.
	Does not satisfy the requirements of the Drinking Water NES, regulation 10.	Would require a plan change process to introduce new or amended SPZ's if the information is updated subsequent to the initial plan change.
Evaluation	<p>Unlikely to result in effective management of SPZs over and above that of the status quo.</p> <p>Events which were found causative in the Havelock North contamination event would not be prevented from reoccurrence.</p>	<p>Unlikely to result in effective management of SPZs over and above that of the status quo, aside from activities already requiring resource consent would have a more explicit decision making process regarding source protection matters.</p> <p>Events which were found causative in the Havelock North contamination event would not be prevented from reoccurrence.</p>

Given the findings of the GEM Report, the non-regulatory options are not able to satisfy regulation 10 of the Drinking Water NES. As section 66(1) of the RMA requires a regional plan to be prepared and changed in accordance with any regulations (which include the Drinking Water NES), the non-regulatory options cannot therefore be considered as reasonably practicable options for further assessment under section 32.

#### 8.8.5 Overview of Regulatory Options

The GEM Report assessed an 'Option C – Regulation of Activities Based on Mapped Source Protection Zones' and recommended this as the most appropriate option stating:

*Provides improved source protection for registered drinking water supplies within the TANK catchment. These supplies service 77% of the region's population.*

*Ability to have greater visibility as to activities occurring in the source protection area and to ensure that activities are undertaken in a manner which minimises risks to the source water.*

Given the need to comply with regulation 10 of the Drinking Water NES, the above assessment has demonstrated that any reasonably practicable option will need to include regulation.

As the registered drinking water supplies within the TANK catchments serving over 500 people are all groundwater supplies, there is also a need for mapping of SPZs to provide certainty around where regulatory restrictions would apply. An appropriately mapped SPZ



would ensure that regulation is effective, by preventing contaminants from entering any source water, and efficient by not arbitrarily applying regulation to areas where there is no pathway to the source water, of a registered drinking water supply. Accordingly, SPZs should ensure the protection of such drinking water supplies where there is a potential source water contamination risk.

Given this, the reasonably practicable options to be assessed under section 32 are based on different variations of the regulation of activities based on mapped SPZs.

#### 8.8.5.1 Option of New Policies and Rules and amendment of RRMP Rules to protect source water within Mapped SPZs

This option consists of the Source Protection Zone provisions included within Change 9. Table 22 below, itemises and summarises the SPZ provisions included within Change 9, it also categorises them into like provisions for the purpose of evaluation.

**Table 47 – Summary of SPZ Provisions included in Change 9**

Provision Reference & Evaluation Category	Summary of Policy / Rule
Policy 6 Regional Plan Policy	<p>For the groundwater of the Heretaunga Plains and surface waters used as source water for Registered Drinking water Supplies, ...;</p> <p>(a) to define the spatial extent of SPZs by defined technical methods or</p> <p>(b) ... to apply a specified default radius for a Registered Drinking Water Supply.</p> <p>(c) to regulate activities within SPZs that may affect the quality of the source water or present a risk to the supply of safe drinking water because of;</p> <p>(i) ... discharge of a contaminant ... including by overland flow or percolation to groundwater, especially in relation to pathogens;</p> <p>(ii) an increased risk to the safety of the water supply as a result of a non-routine event, including a rainfall or drought event, power outages or spills or accidents</p> <p>(iii) potentially impacting on ... treatment required to maintain the safety of the water supply</p> <p>(iv) shortening or quickening the connection between contaminants and the source water, including damage to a confining layer ....</p> <p>(v) in the case of groundwater abstraction, the drawdown of the water levels ...</p>
Policy 7	<p>When considering applications to discharge contaminants or carry out land use activities within;</p>



Provision Reference & Evaluation Category	Summary of Policy / Rule
Regional Plan Policy	<p>(a) the default radius for Registered Drinking Water Supplies, to take into account possible contamination pathways and risks to the quality of the source water...,</p> <p>(b) SPZ, to avoid or mitigate risk of contamination from the activity of the source water ...by taking into account;</p> <p>(i) the... contaminants likely to be present as a result of the activity or discharge</p> <p>(ii) the potential pathways for those contaminants, ...;</p> <p>(iii) the mobility and survival rates of any pathogens likely to be in the discharge...</p> <p>(iv) any risks the proposed land use or discharge activity has ..., including as a result of non-routine events</p> <p>(v) drawdown effects and their management...</p> <p>(vi) the effectiveness of any mitigation measures to avoid or mitigate risk of contaminants entering the source water ...</p> <p>(vii) notification, monitoring or reporting requirements to the Registered Drinking Water Supplier</p>
Policy 8  Regional Plan Policy	<p>To work with the NCC, HDC, Hawkes Bay DHB and Drinking Water Assessors to;</p> <p>(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;</p> <p>(b) understand the nature and extent of the water resources used to supply communities, their connectivity with other waterbodies and their recharge sources</p> <p>(c) 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</p> <p>(d) maintain shared databases of activities that have the potential to adversely affect quality of water used for community supply</p> <p>(e) develop solutions that address risks to water quality including wastewater reticulation solutions in SPZs</p>
<b>Proposed Amendments to Existing RRMP Rules for Drinking Water Source Protection</b>	



Provision Reference & Evaluation Category	Summary of Policy / Rule
RRMP 1 Determinative Rule	Bore Drilling – including construction & alteration of bores – Controlled Activity. Add condition that the bore cannot be located in SPZ. If it is in SPZ defaults to RRMP2.
RRMP 2 Matters for Assessment	Bore Drilling – Restricted Discretionary Activity. Add new matter for discretion - referring to effects on source water for Registered Drinking Water Supplies and any measures to reduce risks.
RRMP 4 Compliance Check Rule	Decommissioning Bores – Permitted Activity. Add new condition - if in SPZ must confirm compliance with conditions within 1 week of activity commencing
RRMP 5 Determinative Rule	Feedlots & Feedpads - Permitted Activity. Add new condition - that the activity cannot be located in SPZ. If is in SPZ defaults to RRMP6.
RRMP 6 Matters for Assessment	Feedlots & Feedpads - Restricted Discretionary Activity. Add new matter for discretion - referring to effects on source water for Registered Drinking Water Supplies and any measures to reduce risks.
RRMP 12 Compliance Check Rule	Stock Feed – Permitted Activity. Add new condition - if in SPZ must confirm compliance with conditions within 1 week of activity commencing.
RRMP 13 Compliance Check Rule	Use of Compost, Biosolids and other Soil Conditioners – Permitted Activity. Add new condition - If in SPZ, and activity involves more than x kg or x m <sup>3</sup> on any property, must confirm compliance with conditions within 1 week of activity commencing.
RRMP 14 Determinative Rule	Animal Effluent – Controlled Activity. Add condition that the discharge cannot be located in SPZ. If is in SPZ defaults to RRMP 15.
RRMP 15 Determinative Rule	Animal Effluent Discharges in Sensitive Catchments (add - including any SPZ) – Discretionary Activity.



Provision Reference & Evaluation Category	Summary of Policy / Rule
RRMP 16 Determinative Rule	Management of Solid Waste on Production Land – Permitted Activity. Add new condition - that the activity cannot be located in SPZ. If is in SPZ defaults to RRMP 52 – Discretionary Activity discharges.
RRMP 37 Determinative Rule	New Sewage Systems – Permitted Activity. Add new condition - that the activity cannot be located in SPZ. If is in SPZ defaults to RRMP 52 – Discretionary Activity discharges.
RRMP 40 Matters for Assessment	Discharge from Closed Landfills – Controlled Activity. Add new matter for control - referring to effects on source water for Registered Drinking Water Supplies and any measures to reduce risks
RRMP 48 Determinative Rule	Discharges of Solid Contaminants, including Cleanfill, to land – Permitted Activity. Add new condition - that the activity cannot be located in SPZ. If is in SPZ defaults to RRMP 52 – Discretionary Activity discharges.
RRMP 49 Determinative Rule	Discharges to Land that may enter Water – Permitted Activity. Add new condition - that the activity cannot be located in SPZ. If is in SPZ defaults to RRMP 52 – Discretionary Activity discharges.
<b>Proposed Rules in Change 9 TANK with SPZ Provisions</b>	
TANK 1 Matters for Assessment	Production Land Use on Farms over 10ha & associated non-point source discharges – Permitted Activity. Conditions include either membership of TANK Catchment Collective or preparation of a Farm Environment Plan. No addition to permitted activity conditions but addition to Schedule including requirements for Catchment Collectives or Farm Plans where land is within SPZ or default radius of community water supplies, to consider potential risk on source water.
TANK 2 Matters for Assessment	Production Land Use on Farms over 10ha & associated non-point source discharges where not part of TANK Catchment Collective and no Farm Environment Plan prepared – Controlled Activity. Matters for control – include measures to prevent effects on quality of source water for Registered Drinking Water Supplies.



Provision Reference & Evaluation Category	Summary of Policy / Rule
TANK 3 Matters for Assessment	Stock Access to rivers, lakes and wetlands – where stock access conditions in TANK 1 not met – Controlled Activity. Matters for control – include measures to prevent effects on quality of source water for Registered Drinking Water Supplies.
TANK 4 Matters for Assessment	Change of Use of Production Land – Restricted Discretionary Activity. Matters for discretion – include measures to prevent effects on quality of source water for Registered Drinking Water Supplies.
TANK 7 Matters for Assessment	Reapplication for Water Permits – Groundwater in HPWMZ. Restricted Discretionary Activity. Matters for discretion – include within an SPZ, effects of the rate of take and volume abstracted on the quality of source water for Registered Drinking Water Supplies.
TANK 8 Matters for Assessment	Surface and Groundwater Takes (at low flows) – Restricted Discretionary Activity. Matters for discretion – include within an SPZ, effects of the rate of take and volume abstracted on the quality of source water for Registered Drinking Water Supplies.
STORMWATER 2 – Matters for Assessment	Stormwater from an existing or new TLA managed stormwater network into water, or onto land where it may enter water – Controlled Activity. Matters for control include - measures to prevent effects on quality of source water for Registered Drinking Water Supplies.
STORMWATER 3 – Matters for Assessment	Stormwater into land or water from industry or trade premises where low risk of contaminants – Controlled Activity. Matters for control include - measures to prevent effects on quality of source water for Registered Drinking Water Supplies.
STORMWATER 4 – Matters for Assessment	Stormwater into land or water from industry or trade premises where high risk of contaminants – Restricted Discretionary Activity. Matters for discretion include - measures to prevent effects on quality of source water for Registered Drinking Water Supplies.

It would be unwieldy to assess whether each of the above provisions is the most appropriate way to achieve the objectives. Accordingly, the provisions are grouped in



Table 22 for assessment against the objectives and for testing efficiency and effectiveness. The evaluation therefore uses the following groupings:

- **SPZ Regional Plan Policies** – Policies 6, 7 & 8;
- **SPZ Determinative Rules** – Rules where location in SPZ determines activity status (these being proposed rules RRMP 1, RRMP 5, RRMP 14, RRMP 15; RRMP 16, RRMP 37, RRMP 48 & RRMP 49);
- **SPZ Compliance Check Rules** - Rules where location in SPZ requires a demonstration of compliance with other permitted activity conditions to confirm status as a permitted activity (these being proposed rules RRMP 4, RRMP 12, & RRMP 13);
- **SPZ Matters for Assessment** - Rules where specific assessment of effects within SPZ is required (these being proposed rules RRMP 2, RRMP 6, RRMP 40, TANK 1, TANK 2, TANK 3, TANK 4, TANK 7, TANK 8, STORMWATER 2, STORMWATER 3, and STORMWATER 4)

#### 8.8.6 Assessment of Provisions Effectiveness in Achieving Objectives

For the SPZ provisions a two-stage evaluation is used. Firstly, at a general level the provisions are evaluated for the effectiveness in achieving one or more of the relevant objectives to the SPZ provisions. It is not necessary or expected that each group of SPZ provisions would be effective in achieving each of the five objectives, as the objectives range in focus including general water quality values (objective 1), to specific ground water resource management (objective 9), water quantity management (objective 13) non-regulatory methods direction (objective 15) and specific direction for the management of activities within the source protection zone of Registered Drinking Water Supplies (objective 17). To pass the section 32 test of provisions being appropriate for the achievement of the objectives, the provisions must be effective in achieving at least one of these objectives.

If the provisions are considered effective in achieving at least one of the Change 9 objectives, then they are evaluated for their efficiency, including costs and benefits in accordance with section 32(2) of the RMA.

##### 8.8.6.1 SPZ Policies Effectiveness Assessment

The following assessment seeks to establish whether policies 6, 7 & 8 of Change 9 (as summarised in Table 22 above) are the most appropriate way to achieve the relevant objectives in accordance with section 32(1)(b) of the RMA.

**Table 48 – SPZ Policies Assessment**



Objective <sup>130</sup> & Summary of relevant components	Assessment of Effectiveness
<p>Objective 1 includes, Te Mana o te Wai and, ki uta ki tai principles are upheld; and that when setting objectives and targets, the waterbody values in Table 1 (RPS) are provided for. These include as a primary value for the TANK catchments: 'Urban water supply for cities, townships and settlements and water supply for key social infrastructure facilities'.</p>	<p>The suite of SPZ Policies 6, 7 &amp; 8 provide direction to define the SPZ by technical methods or to apply specified default radius and to regulate activities within the SPZ that may affect the quality of source water (Policy 6); to avoid or mitigate risks of contaminants affecting source water within SPZs in the assessment of resource consents (Policy 7); and via non regulatory collaboration and information sharing to address risks to source water quality in SPZ's.</p> <p>These policies will help to ensure that the primary value of urban water supplies is provided for in the TANK catchments, which will also protect water quality in achieving the principles of e Mañā o te Wai and, ki uta ki tai.</p>
<p>Objective 9 – Groundwater is maintained to enable 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.</p>	<p>Proposed policies 6, 7 &amp; 8 will collectively achieve this objective in terms of maintaining the groundwater resource to enable the provision of safe and secure water for municipal use.</p> <p>The policies will not however contribute to people and communities safely meeting their domestic water needs where such water is not from a Registered Drinking Water Supply protected by an SPZ or PPZ default radius. The suite of policies is targeted at Registered Drinking Water Supplies in accordance with the Drinking Water NES. Such domestic water needs will however be addressed by other TANK policies targeted at maintaining the quality and quantity of groundwater generally, as opposed to explicitly protecting source water for domestic supplies.</p>
<p>Objective 13 – Manages water quantity to ensure there is priority allocation and reservation for domestic and municipal supply.</p>	<p>The emphasis of policies 6, 7 &amp; 8 is about avoiding adverse effects on water quality within SPZs, however aspects of the policies are also consistent with achieving objective 13. This includes Policy 6c) v) being the drawdown effects of groundwater extraction; and 8a) in understanding the nature and extent of the water resource used to supply communities. Consideration of the drawdown effects of other water takes on Registered Drinking Water supplies is consistent with such takes having priority allocation.</p>

<sup>130</sup> Refer to section 8.7.3 above for the full objective wording.



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; the importance of monitoring, resource investigations...

Objective 15 encourages collaboration in a non-regulatory manner in freshwater management, including for monitoring and investigation. Policy 8 is appropriate for achieving Objective 15 in the context of increasing the level and quality of information on the protection of source water for Registered Drinking Water supplies.

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.

Conclusion - Effectiveness of Policies in Achieving Objectives

This assessment demonstrates that proposed policies 6, 7 & 8, as a collective, are an effective way of achieving each of the relevant objectives of Change 9. It is noted however that the policies are specific to the source water of Registered Drinking Water Supplies, rather than to source water of drinking water generally. This is based on the direction of the Drinking Water NES which focusses on drinking water supply. Amending the policies to have a more general application to protecting drinking water would be possible but would reduce the efficiency of the provisions as is discussed further below.

#### 8.8.6.2 SPZ Determinative Rules Effectiveness Assessment

The following assessment seeks to establish whether rules RRMP 1, RRMP 5, RRMP 14, RRMP 15; RRMP 16, RRMP 37, RRMP 48 & RRMP 49) (as summarised in Table 22 above) are effective in achieving the relevant objectives. This in combination with the efficiency assessment to follow, will help determine the overall appropriateness of the rules for achieving the objectives of Change 9 in accordance with section 32(1)(b) of the RMA. In



brief these rules all include a condition that the activity may not be located in an SPZ, meaning that if the activity is located in a SPZ resource consent will be required.

**Table 49 - SPZ Determinative Rules Effectiveness Assessment**

Objective <sup>138</sup> (see summaries in Table 23 above)	Assessment of Effectiveness
<b>Objective 1</b>	<p>The suite of determinative rules will help to ensure that the primary value of urban water supplies is provided for in the TANK catchments by protecting the source water of such supplies. This protection is provided by requiring that activities within SPZs that pose a potential risk to source water be assessed via a resource consent process. The activities covered by determinative rules are: Bore Drilling; Feedlots &amp; Feedpads; Animal Effluent; Management of Solid Waste on Production Land; New Sewage Systems; Discharges of Solid Contaminants, including Cleanfill, to land; and Discharges to Land that may enter Water.</p> <p>This more rigorous resource consent process would also contribute to upholding the principles of Te Mana o te Wai and integrated mountains to the sea, ki uta ki tai in maintaining the quality of groundwater.</p>
<b>Objective 9</b>	<p>The determinative rules will collectively achieve Objective 9 by using the trigger of the resource consent process in providing a formal check of the potential effects of the specified activity in the SPZ to ensure that it will not adversely affect the provision of safe and secure water for municipal use.</p> <p>Like policies 6, 7 and 8, these rules will not however contribute to people and communities safely meeting their domestic water needs where such water is not from a Registered Drinking Water Supply.</p>
<b>Objective 13</b>	<p>All of the determinative rules seek to manage the effects of activities within SPZ's that may have an effect on water quality rather than quantity. The determinative rules do not therefore contribute to the achievement of Objective 13.</p>
<b>Objective 15</b>	<p>The determinative rules are a regulatory provision so do not directly contribute to the achievement of Objective 15. Indirectly however, the monitoring of the required resource consents could contribute to the information and knowledge base about the effects of activities within SPZs.</p>
<b>Objective 17</b>	

<sup>138</sup> Refer to section 8.7.3 above for the full objective wording.



<b>Conclusion - Effectiveness of Determinative Rules in Achieving Objectives</b>	<p>This assessment demonstrates that the determinative rules, as a collective, are an effective way of achieving Objectives 1 &amp; 9. It is noted however that these rules are specific to the mapped SPZs, in protecting the source water of Registered Drinking Water Supplies serving over 500 people, rather than to source water of drinking water generally. The same comments apply as in the conclusion to the policies assessment above, with this matter being discussed further under the efficiency assessment below.</p> <p>The determinative rules will not directly achieve Objective 13 which focusses on water quantity, although the rules will contribute to ensuring that the priority allocation for municipal supply will be of an appropriate quality.</p> <p>Similarly, the determinative rules are not relevant to achieving Objective 15 and its promotion of non-regulatory methods.</p> <p>As the determinative rules are an effective way of achieving Objectives 1 and 9, they can be considered as appropriate provisions under section 32(1)(b) subject to the efficiency evaluation provided below.</p>
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#### 8.8.6.3 SPZ Compliance Check Rules Effectiveness Assessment

The compliance check rules are RRMP 4 'Decommissioning Bores', RRMP 12 'Stock Feed', and RRMP 13 'Use of Compost, Biosolids and Soil Conditioners'. The assessment against the objectives is considered to be the same as for the determinative rules above as both sets of rules are regulation that will be an effective way of achieving objectives 1 and 9 in particular in protecting water quality for municipal water supplies. Likewise, the compliance check rules relate to water quality and are not directly relevant in terms of achieving Objective 13 relating to water quantity, or Objective 15 relating to non-regulatory matters. No further assessment of the effectiveness of the Compliance Check rules is required as they can be considered as an effective way of achieving the relevant objectives of Change 9 under section 32(1)(b) subject to the efficiency evaluation provided below.

#### 8.8.6.4 SPZ Effectiveness Assessment of Matters for Assessment

The rules including matters for assessment related to SPZs and or the protection of the quality of source water for Registered Drinking Water supplies are RRMP 2, RRMP 6, RRMP 40, TANK 1, TANK 2, TANK 3, TANK 4, TANK 7, TANK 8, STORMWATER 2, STORMWATER 3, and STORMWATER 4. The following assessment seeks to establish whether these rule provisions, in combination with the efficiency assessment to follow, will help determine the overall appropriateness of the rules for achieving the objectives of Change 9 in accordance with section 32(1)(b) of the RMA.

In brief these rules themselves can be grouped into smaller subsets summarised in the following bullet points:



- Restricted Discretionary Activity Rules with the matters for discretion including effects on source water for Registered Drinking Water Supplies and any measures to reduce risks (or similar). This subset includes rules RRMP 2 'Bore Drilling', RRMP 6 'Feedlots & Feedpads', TANK 4 'Change of Use of Production Land', TANK 7 'Reapplication for Groundwater Permit', TANK 8 'Surface & Groundwater Water Takes (low flow)', and STORMWATER 4 'Industrial – High Risk'.
- Controlled Activity Rules with the matters for control including effects on source water for Registered Drinking Water Supplies and any measures to reduce risks (or similar). This subset includes rules RRMP 40 'Discharge from Closed Landfills', TANK 2 'Production Land Use', TANK 3 'Stock Access', STORMWATER 2 'Territorial Authority Networks', and STORMWATER 3 'Industrial – Low Risk'.
- Permitted Activity Rule TANK 1 – with the matters to be addressed in the required industry programmes, catchment collectives or farm management plans, to address potential effects on SPZs or risks to other community water supplies.

Table 50 SPZ Effectiveness Assessment of Matters for Assessment

Objective <sup>132</sup> (see summaries in Table 23 above)	Assessment of Effectiveness
<b>Objective 1</b>	The suite of matters for assessment will help to ensure that the primary value of urban water supplies is provided for in the TANK catchments by protecting the source water of Registered Drinking Water Supplies. This protection is provided by requiring that the assessment of activities requiring resource consent consider effects and risks to the source water of Registered Drinking Water Supplies. This will also help to protect groundwater quality in upholding the Objective 1 principles of 'Te Mana o te Wai' and 'ki uta ki tai'.
<b>Objective 9.</b>	<p>The rules including matters for assessment will achieve this objective by ensuring that the preparation and assessment of resource consents requires consideration of effects and risks to the source water of Registered Drinking Water Supplies. The activities subject to these rules would have the potential to adversely affect the source water of drinking supplies.</p> <p>As opposed to the determinative and compliance check rules, these rules including matters for assessment seek to protect the source water within the mapped SPZs, for Registered Drinking Water Supplies serving more than 500 people and source water of Registered Drinking Water supplies generally (including supplies serving 500 or less people). These rules are</p>

<sup>132</sup> Refer to section 8.7.3 above for the full objective wording.



Objective <sup>132</sup> (see summaries in Table 23 above)	Assessment of Effectiveness
	therefore more effective in achieving the breadth of Objective 9 in seeking to maintain groundwater to enable 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. It is noted however that these rules do not seek to protect unregistered drinking water supplies from the effects of groundwater contamination.
<b>Objective 13</b>	Most of the rules including matters for assessment seek to manage the effects of activities on the water quality used for Registered Drinking Water Supplies, rather than quantity. However, restricted discretionary activity rules TANK 7 'Reapplication for Groundwater Permit' and TANK 8 'Surface & Groundwater Water Takes (low flow)' do both relate to managing effects on water quantity that may affect source water for Registered Drinking Water Supplies. These two rules are therefore effective in achieving Objective 13 and ensuring that there is priority allocation and reservation of groundwater for domestic and municipal supply, such that takes for other purposes cannot adversely affect Registered Drinking Water Supplies.
<b>Objective 15</b>	The rules including matters for assessment are regulatory provisions so do not directly contribute to the achievement of Objective 15. Indirectly however, the information gathered for the preparation and assessment of resource consents will contribute to the information and knowledge base about the effects of activities on Registered Drinking Water Supplies.
<b>Objective 17</b>	
<b>Conclusion - Effectiveness of Determinative Rules in Achieving Objectives</b>	<p>This assessment demonstrates that the rules including matters for assessment, as a collective, are an effective way of achieving Objectives 1, 9 &amp; 13. These rules are more general than the determinative and compliance check rules by applying to the source water of all Registered Drinking Water Supplies and not just the mapped SPZs.</p> <p>The rules including matters for assessment are not directly relevant to achieving Objective 15 and its promotion of non-regulatory methods.</p> <p>As the matters for assessment rules will be an effective way of achieving Objectives 1, 9 &amp; 13, they can be considered as appropriate provisions under section 32(1)(b) subject to the efficiency evaluation provided below.</p>

#### 8.8.7 Assessment of Provisions Efficiency in Achieving Objectives

The following efficiency assessment seeks to satisfy section 32(2):



An assessment under subsection (1)(b)(ii) must—

(a) identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for—

(i) economic growth that are anticipated to be provided or reduced; and

(ii) employment that are anticipated to be provided or reduced; and

(b) if practicable, quantify the benefits and costs referred to in paragraph (a); and

(c) assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.

The same option category groupings are used as for the effectiveness assessment above, with each group of provisions assessed in regard to their benefits and costs of the environmental, economic, social and cultural effects that are anticipated. Commentary on opportunities for economic growth and employment are included in the consideration of economic effects. Much of the assessment will be qualitative by necessity, but where quantitative information is available it will be included in the assessment table. The risk of acting or not acting is assessed under a separate heading below.

#### 8.8.7.1 SPZ Policies Efficiency Assessment

The following assessment seeks to establish whether policies 6, 7 & 8 of Change 9 (as summarised in Table 22 above) are the most appropriate way to achieve the relevant objectives in accordance with section 32(1)(b) of the RMA. The assessment undertaken above demonstrates that the policies are an effective way of achieving the relevant Objectives. The following table seeks to evaluate the efficiency of these provisions and their direction for regulatory control in particular, in determining their overall appropriateness.

**Table 51 –SPZ Policies Efficiency Assessment**

Effects	Benefits & Costs
Environmental	The policies seek to protect and maintain the quality of source water for Registered Drinking water supplies. This has a corresponding environmental benefit in ensuring the life supporting capacity of that water is protected.
Economic	There are economic costs to those landowners and resource users within SPZs who would not otherwise require resource consent but would now due to the direction of Policy 6 of Change 9. These costs could include professional assistance in preparing resource consent applications and administration fees applicable for lodging a resource consent, in addition to time delays in undertaking an activity until any resource consent has been



Effects	Benefits & Costs
	<p>granted. There may also be additional compliance costs to meet resource consent conditions and monitoring costs.</p> <p>Economic costs to business and residents due to health out breaks caused by contamination of registered drinking water supplies would be significant. There would be related economic costs to hospitality and primary processing businesses dependent on safe drinking water from Registered Drinking Water Supplies. The Hastings Urban supply serves 64,764 people, the Napier supply serves 50,804 people and the Clive supply serves 560 people<sup>133</sup>. There are therefore economic benefits in providing a water supply that protects the health of some 116,128 people.</p>
Social & Cultural	<p>Reduced risk of contaminated drinking water and associated health effects for the 88% of the population within the TANK Catchments who are served by a Registered Drinking Water supply<sup>134</sup>.</p> <p>The potential costs of not having safe source water for Registered Drinking Water supplies as sought by these policies, is exemplified by the August 2016 campylobacteria outbreak in Havelock North resulting in 5,500 people suffering illness, 45 people being hospitalised and possible contribution to three deaths<sup>135</sup>.</p> <p>Aligns with Te Mana o te Wai and integrated mountains to the sea, ki uta ki tai principles of Objective 1, in the protection of the life supporting capacity of water and maintaining its quality for drinking.</p>
Appropriateness	<p>At a general level the suite of policies are considered efficient in having a predominance of benefits over costs in achieving the relevant objectives of Change 9.</p>

#### 8.8.7.2 SPZ Determinative Rules Efficiency Assessment

The following assessment seeks to establish whether the determinative rules (as summarised in Table 22 above) are the most appropriate way to achieve the relevant objectives in accordance with section 32(1)(b) of the RMA. The assessment undertaken

<sup>133</sup> *Drinking Water Source Protection – Draft Regulatory Provisions for TANK Catchments – Draft for Discussion*, Good Earth Matters, June 2018, (page 7)

<sup>134</sup> *Ibid.*

<sup>135</sup> *Report of the Havelock North Drinking Water Inquiry: Stage 1, Government Inquiry into Havelock North Drinking Water*, May 2017 (page 1).



above demonstrates that the determinative rules are an effective way of achieving the relevant Objectives. The following table seeks to evaluate the efficiency of these provisions in determining their overall appropriateness. It is noted that the efficiency assessment for the SPZ policies in Table 26 above provides a general assessment of the policy direction to have regulation applying to the protection of SPZs. The assessment in the Table below and following paragraphs, attempts to be more specific to the actual rules used.

**Table 52 - SPZ Determinative Rules Efficiency Assessment**

Effects	Benefits & Costs
Environmental	The determinative rules seek to protect via the resource consent process the quality of source water for Registered Drinking water supplies. This has a corresponding environmental benefit in ensuring the life supporting capacity of that water is protected.
Economic	The matters referred to under economic effects for the policy table above are also relevant to the determinative rules, are not repeated here. Rather, an analysis of the economic effects of the specific determinative rules is provided. While the general policy analysis demonstrates the appropriateness of regulating activities within SPZs to prevent the costs of human health and associated economic effects from contaminated drinking water, care must be taken to ensure costs are not unnecessarily placed on individual landowners and resource users within SPZ's for activities that do not threaten the quality of the source water for the Registered Drinking Water Supplies. That analysis is provided in section 8.7.7.3 below.
Social & Cultural	The same matters listed above in the policy table, also apply to the social and cultural effects of determinative rules. That is, social benefits from a healthy drinking water supply source and cultural benefits of alignment with the water quality values of Te Mana o te Wai and ki uta ki tai principles.
Appropriateness	The determinative rules are considered efficient in having a predominance of benefits over costs in achieving the relevant objectives of Change 9 on the basis of the above assessment. This assessment is however incomplete with additional assessment of costs below, including an overall conclusion on the appropriateness of the determinative rules.

#### **8.8.7.3 Detailed Analysis of Economic Costs and Benefits of Determinative Rules**

The activities covered by determinative rules are: Bore Drilling; Feedlots & Feedpads; Animal Effluent; Management of Solid Waste on Production Land; New Sewage Systems; Discharges of Solid Contaminants, including Cleanfill, to Land; and Discharges to Land that



may enter Water. These are activities permitted by existing rules that the JWG consider would not currently meet regulation 10 of the Drinking Water NES. The determinative rules propose the addition of a condition, which would prevent activities within a SPZ from being a permitted activity, which would result in these rules complying with regulation 10.

To gain an understanding of the additional imposition of economic costs on land owners caused by the need to gain resource consent for activities within SPZs that are subject to these rules, it is necessary to understand the existing conditions applying to these rules. Particularly those conditions requiring separation from water resources, which is effectively what the determinative SPZ rules would be doing. The following table sets out the proposed determinative rules and identifies the conditions requiring separation from waterbodies currently applying to them.

**Table 53 – Nature of Proposed Determinative Rules & Existing Conditions**

Rule	Existing conditions or relevance	Comment
RRMP 1 Bore Drilling	Only condition is: <i>The bore shall be cased and sealed to prevent aquifer cross-connection, and leakage from the ground surface into ground water.</i>  No existing water body location conditions.	This would mean any new bore in the SPZ would require resource consent as a Restricted Discretionary Activity (RDA). This would enable initial assessment and ongoing monitoring for new bores within the SPZ.
RRMP 5 Feedlots & feedpads	Existing conditions include: <i>a. The land used for the feedlot or feedpad shall be managed in a manner that prevents any seepage of contaminants into groundwater; b. The feedlot or feedpad shall be located no less than 20 m from any surface water body</i>	Compliance with condition (a) would protect SPZs from contamination. Condition (a) however requires a subjective judgement to determine if compliance is being achieved. RDA resource consent will enable a more rigorous assessment of proposed contaminant management.
RRMP 14 Animal Effluent	Existing conditions include: <i>a. Any area used for storing animal effluent, where there is a potential for contamination of groundwater by seepage of contaminants, shall be managed in a manner that prevents any such contamination.; and e. There shall be no discharge within 30 m of any bore or well.</i>	RRMP requires resource consent as a controlled activity in any case. The effect of adding a new condition preventing location within an SPZ would push the activity to an RDA status allowing consent to be refused if the potential adverse effects on the SPZ are more than minor. The SPZ condition would be a similar approach to existing condition (e)



Rule	Existing conditions or relevance	Comment
RRMP 15 Discharge of Animal Effluent in Sensitive Catchments	The SPZ would be added to this discretionary activity rule as a sensitive catchment. The existing sensitive catchments listed in the rule include: <i>Heretaunga Plains Unconfined Aquifer</i>	There is a partial overlap between the SPZ and Heretaunga Plains Unconfined Aquifer, but there is a significant proportion of the SPZ outside that unconfined aquifer.
RRMP 16 Management of Solid Waste on Production Land	This permitted activity rule applies to farm tips and offal holes and includes the existing waterbody related conditions: <i>f. There shall be no discharge within 20 m of any surface water body, or over the Heretaunga Plains ... unconfined aquifers ... Schedule IV.; h. There shall be no discharge within 30 m of any bore or well.; and i. The discharge shall not cause any contamination of groundwater.</i>	Same comment as above for the Heretaunga Plains Unconfined Aquifer condition. Location within an SPZ would result in RDA resource consent being required. The SPZ condition would be a similar approach to existing condition (e) requiring separation from bores and wells.
RRMP 37 New Sewage Systems	This permitted activity rule includes the existing waterbody related conditions: <i>d. The discharge shall not occur over the Heretaunga Plains ... unconfined aquifers ... Schedule IV, e. The discharge and land treatment field shall not be within 20 m of any surface water body...; i... the discharge shall not occur within 30 m of any bore drawing groundwater from an unconfined aquifer into which any contaminant may enter as a result of the discharge.</i>	Again, this rule would introduce the same RDA resource consent provisions for SPZ's as already apply to the unconfined aquifer and within 30m of a bore drawing from an unconfined aquifer. New sewage systems would not be uncommon within the SPZ for areas outside of the existing municipal reticulated network, so this rule is likely to generate a number of future resource consents.
RRMP 48 Discharges of solid contaminants including cleanfill	This permitted activity rule includes the existing waterbody related conditions: <i>g. There shall be no discharge within 20 m of any surface water body, or over the Heretaunga Plains... unconfined aquifers ...in Schedule IV...</i>	Again, this rule would introduce the same RDA resource consent provisions for SPZ's as already apply to the unconfined aquifer.
RRMP 49 Discharges	This permitted activity rule has the same condition 'g' as RRMP 48 above, as well	Same comment as for RRMP 48. Conditions i) and j) require a degree of



Rule	Existing conditions or relevance	Comment
to land that may enter water	as the following conditions: <i>i. There shall be no discharge within 30 m of any bore drawing groundwater from an unconfined aquifer into which any contaminant may enter as a result of the discharge. j. The discharge shall not cause any degradation of existing ground water quality in confined aquifers in the Heretaunga Plains ... aquifer systems.</i>	assessment and judgement to determine compliance. An RDA resource consent process will ensure that such assessment is formalised into a resource consent process for land within a SPZ.

Of the determinative rules proposed, it is only RRMP 1 'Bore Drilling' that does not include any existing condition requiring separation from water bodies, existing bores or the Heretaunga Plains Unconfined Aquifer. The existing condition does however seek to prevent "aquifer cross connection and leakage from the ground surface into ground water." Bore drilling does pose a potential contamination pathway into the source water of Registered Drinking Water Supplies, therefore assessment and monitoring via a resource consent process is considered to be justified when the bore is located within an SPZ. This Rule was identified in the GEM Report and by the JWG as being appropriate to regulate.

The remainder of the rules listed in the table above all relate to activities that can potentially contaminate water and include existing conditions requiring separation from water bodies. It follows that a condition requiring avoidance of the SPZ as a sensitive water body in terms of the health consequences of any contamination, would also be appropriate.

In considering whether the proposed SPZ determinative rules would provide an appropriate level of economic cost to resource users it is useful to compare the proposed Change 9 SPZ provisions to the equivalent provisions in other regional plans. If other regional plans require resource consent for similar activities to which the rules set out in the above table apply, then there can be a level of comfort that the economic costs which will be incurred by resource users are appropriate.

Greater Wellington Proposed Natural Resources Plan



The Greater Wellington Proposed Natural Resources Plan<sup>136</sup> identifies the following activities as posing a risk to drinking water supplies and are regulated in mapped areas of surface water and groundwater catchments associated with Registered Drinking Water Supplies: septic tanks/ pit toilets, wastewater, agricultural effluent, agrichemicals, pest control sprays, farm dumps and offal pits. Discharges of water are also controlled, such as from contaminated land within the mapped source protection areas.

#### Canterbury Land and Water Regional Plan

The Canterbury Land and Water Regional Plan<sup>137</sup> includes 'Community Drinking Water Supply' source protection applying to registered community supplies serving more than 25 people.

Source protection areas around groundwater community drinking sources range from a distance of 100-2,000 m up-gradient and 100-400 m downgradient of the bore, with unconfined and semi-confined aquifers having greater protection distances than confined aquifers. These source protection areas are mapped and referred to as 'Community Drinking-water Protection Zones'. Examples of activities where location within a Community Drinking-water Protection Zone is a resource consent trigger include: wastewater discharges, agrichemical wash water that may enter water, offal pits, refuse disposal to land, solid animal waste, stockholding areas, animal effluent, silage pits and stockpiles of organic material, stock access to the beds of rivers and lakes, and drainage water.

#### Comparison of Activities Regulated for SPZ

Bearing in mind that different regional plans have different definitions and categorisations of activities there is a general consistency between the activities proposed to be regulated with determinative rules by Change 9 and the activities similarly regulated in the Greater Wellington and Canterbury Plans. Proposed Change 9 and the other two plans are consistent in regulating wastewater / sewage systems, agricultural / animal effluent and organic products, solid waste (farm tips and offal pits), while the generic rule in Change 9 'discharges to land that may enter water' would capture some of the specifically identified activities in the other plans.

*Placeholder if land use area information becomes available to insert discussion here*

#### Conclusion of Appropriateness of Determinative Rules

<sup>136</sup> It is important to note that these provisions have been notified on the basis that they pass the section 32 RMA tests, but the RMA schedule 1 submission and hearing process is still to be completed with decisions on submissions scheduled to be notified in July 2019.

<sup>137</sup> Operative December 2016.



There is no quantitative information available on the economic costs of the determinative rules. The qualitative assessment provided above however, demonstrates that introducing a condition preventing location within an SPZ is consistent with the existing conditions requiring separations from water bodies applying to those rules and is consistent with equivalent SPZ rules that apply within the Greater Wellington and Canterbury regional plans. For these reasons the proposed determinative rules are considered appropriate having regard to efficiency in terms of benefits over costs.

#### 8.8.7.4 SPZ Compliance Check Rules Efficiency Assessment

The compliance check rules are RRMP 4 'Decommissioning Bores', RRMP 12 'Stock Feed', and RRMP 13 'Use of Compost, Biosolids and Soil Conditioners'. These rules contain a condition stating: *"Where the activity is in a SPZ, information to confirm compliance with conditions (x) to (x) shall be provided within one week of the activity first commencing or on request"* (or minor variations thereof).

The activities regulated by these rules are considered to pose a lesser threat to groundwater within SPZs compared to the activities subject to the determinative rules. The rationale for the compliance check rules is that an activity being within an SPZ is not sufficient to justify resource consent if all of the other permitted activity conditions are being complied with. For instance, in the case of decommissioning bores (RRMP 4) the existing conditions include

*a....bores shall be backfilled and sealed at the surface to prevent contamination of groundwater. b. ... intersecting groundwater shall be sealed to prevent the vertical movement of groundwater, and to permanently confine the groundwater to the specific zone (or zones) in which it originally occurred.*

If compliance with these conditions can be verified there would be no regulatory benefit to justify the additional regulatory cost of also requiring resource consent.

RRMP 13 & 14 regulate relatively common agricultural practices such as the storage of silage or other stock feed and the use of compost. Existing conditions applying to these rules control the run off of contaminants and application rates. Compliance with such conditions and the more benign nature of the potential contaminants compared to the activities subject to the determinative rules means that there would be no regulatory benefit to justify the additional regulatory cost of also requiring resource consent.

As these rules do not require resource consent being obtained, they result in lesser costs to resource uses compared to the determinative rules. For this reason, they can be considered more efficient than the determinative rules and are appropriate to use where the activities pose little to no risk of groundwater contamination given compliance with existing conditions.

The above assessment of efficiency in combination with the previous effectiveness assessment, demonstrates that the compliance check rules are the most appropriate way



to achieve the relevant objectives in accordance with section 32(1)(b) of the RMA for the activities subject to those rules.

#### 8.8.7.5 SPZ Efficiency Assessment of Matters for Assessment

As set out under the effectiveness assessment these rules consist of the following three groups:

- Restricted Discretionary Activity Rules with the matters for discretion including effects on source water for Registered Drinking Water Supplies and any measures to reduce risks (or similar).
- Controlled Activity Rules with the matters for control including effects on source water for Registered Drinking Water Supplies and any measures to reduce risks (or similar).
- Permitted Activity Rule TANK 1 – with the matters to be addressed in the required industry programmes, catchment collectives or farm management plans, to address potential effects on SPZs or risks to other community water supplies.

These provisions will not result in new resource consents being required but will result in additional matters to be assessed for activities already requiring resource consent.

In terms of costs and benefits, the assessment will be very similar, if not the same, for environmental effects and social and cultural effects, to that set out for the SPZ policies and the SPZ determinative rules in Tables 26 & 27 above. A table-based assessment is not therefore necessary to test the efficiency of the rules in the SPZ matters for assessment category.

The expected costs related to economic effects is the additional information inputs and time that will be required in the preparation and assessment of resource consent applications subject to the matters for assessment rules. This will include both applications for new activities and the reconsenting of existing activities.

For new activities these costs will be less than they are for the determinative rules given that the affected activities will already require resource consent. For reconsenting however, the cost of these rules may be relatively significant as they are likely to necessitate the applicants needing to commission additional technical reports.

By nature, the activities in this category have the potential to have effects on the environment that require assessment through the resource consent process to ensure that such effects can be avoided remedied or mitigated. Requiring an additional check in this process to assess effects on source water for Registered Drinking Water Supplies and any measures to reduce risks is considered to be an efficient way of achieving Objectives 1 and 9 in particular, albeit that there will be a cost to resource users in providing the technical information in support of their applications to enable such a check to be made.



The above assessment of efficiency in combination with the previous effectiveness assessment, demonstrates that the matters for assessment rules are the most appropriate way to achieve the relevant objectives in accordance with section 32(1)(b) of the RMA for the activities subject to those rules.

#### 8.8.7.6 Efficiency of the SPZ Boundaries

The assessment of the proposed SPZ policies and rules above demonstrates that those provisions are appropriate for achieving the objectives of Change 9 having regard to section 32(1)(b) of the RMA. However, it is important to understand whether the SPZ boundaries that those provisions are based on are not so wide as to impose unnecessary costs where there is little or no risk of source water contamination.

The proposed SPZ boundaries are based on the Hastings District Council commissioned Tonkin & Taylor Report, *Source protection zones for public supply bores*, October 2018 (the Tonkin & Taylor Report). This report sets out the rationale and literature on which the proposed SPZ boundaries are based, which need not be repeated here.

Referring to the map included as Figure 4 above, the Tonkin & Taylor Report does identify two levels of SPZ for the purposes of avoiding microbial contamination. These being the brown shaded 'SPZ2a' defined as the area<sup>138</sup>.

- Located within 100m of bores;
- Having a vertical travel time of less than 1 year from the ground surface to the top of the screen within the confined aquifer layer;
- Mapped as the outcrop of the confined aquifer i.e. where the unconfined aquifer is mapped on the Heretaunga Plains

The area identified as SPZ2 defined as:

- The estimated travel time through the confining layer is greater than one year and;
- Does not fall in SPZ2a described above.

The Tonkin & Taylor Report states<sup>139</sup>: "The protective effect of the confining layer above Frimley Park and Eastbourne Street means that a different level of control may be allowed over the unshaded area compared with the brown shaded area."

The yellow shaded area in extending a distance of 100m from the bores in the confined aquifer is by way of comparison, consistent with the approach used in the Canterbury Land and Water Plan. Figure 6 below is extracted from Schedule 1 'Community Drinking Water

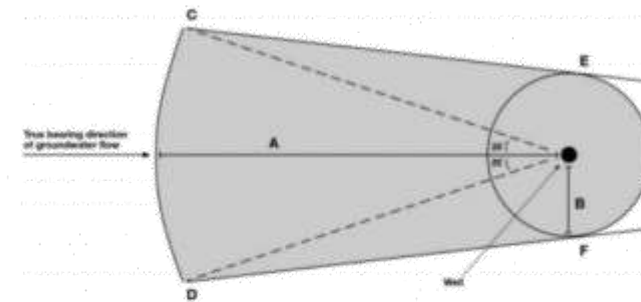
<sup>138</sup> Tonkin & Taylor Report, *Source protection zones for public supply bores*, October 2018 (Page 20).

<sup>139</sup> Ibid (Page 22).



Protection Zones<sup>140</sup> of the Canterbury Land and Water Plan. Note the fixed 100m protection distance applied to bores within confined aquifers regardless of screen depth.

**Figure S1A Method for calculating the area of a provisional Group or Community Drinking-water Protection Zone.**



The area of the protection zone is determined by selecting from the table below depending on the screen depth (or well depth if no screen depth is recorded) and aquifer type.

**Table S1A - Protection Areas**

Screen Depth (or well depth if no screen depth is recorded)	Aquifer Type	Protection distances (m)	
		Upgradient from the bore (A)	
<10 m	All	2,000	200
10 – 30 m	Unconfined or semi confined	1,000	200
	Confined	100	100
	Coastal Confined Gravel Aquifer 1	400	400
30 – 70 m	Unconfined or semi confined	500	200
	Confined	100	100
	Coastal Confined Gravel Aquifer 1	400	400
> 70 m	Unconfined or semi confined	100	100
	Confined	100	100
	Coastal Confined Gravel Aquifer 1	400	400

**Figure 6 – Canterbury Land & Water Plan Example of Protection Area Definition**

There is also a more conservative option based on the Tonkin & Taylor SPZ3 map shown in Figure 5 above, which defines a capture zone of where source water quality reaching the HDC bores could be at risk from other non-microbial contamination considering 30 year travel times and groundwater flow paths<sup>140</sup>.

<sup>140</sup> Ibid (Page 19).



The following Table sets out the three alternative options of SPZ boundaries provided in the Tonkin & Taylor Report, with recommendations on their appropriateness for reference in Change 9.

**Table 54 – Evaluation of Tonkin & Taylor Source Protection Zone Boundary Options**

Boundary Option	Appropriate Use in Change 9
SPZ2 (Area within outer solid lines in Figure 4 above)	Conservative option would be to apply the determinative and compliance check rules to this boundary. Although there is argument that the yellow areas in SPZ2a are sufficient for protecting against microbial infection from discharges, the adoption of this boundary would cover the coincidence of multiple risk factors such as a discharge to ground coinciding with a flooding event and a pathway through the confined aquifer layers by an unsealed bore for example.
SPZ2a (Area shaded brown in Figure 4 above)	This map option may be appropriate to apply to the determinative and compliance check rules. This would be on the basis that it is an effective area for protecting source water risk against microbial infection from discharges and an efficient area in not applying additional regulation in the form of resource consent requirements where there is little to no risk of microbial contamination.
SPZ3 (Area within outer solid lines in Figure 5 above)	This option would seem appropriate to include in Change 9 for consideration in the 'matters for assessment rules'. The 30 year pathway to the source water of the Registered Drinking Water supplies is not likely to be relevant for most applications, but could be relevant for activities of a significant scale involving non-microbial contaminants of concern. This would however require HBRC consents staff to exercise judgement in guiding resource consent applicants when additional assessment of



potential source water contamination of  
Registered Drinking Water Supplies is required.

Based on this evaluative assessment the SPZ3 map would be appropriate to include in Change 9 for information purposes in the assessment of resource consent applications but not for triggering the determinative or compliance assessment rules.

In adopting a precautionary approach, the SPZ2 maps would be most appropriate to trigger the determinative and compliance check rules. If, however there is scientific support that the SPZ2a maps, or any other maps produced which may refine these maps further (as the Tonkin and Taylor Report acknowledge the maps are conservative<sup>141</sup>), are sufficient to protect the source water of Registered Drinking Water Supplies from activities of risk, then that would be a more efficient option for achieving the objectives.

#### 8.8.8 Risk of Acting or Not Acting

An RMA section 32 evaluation report must contain an assessment of the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions (under section 32(2)(c) the RMA). It is considered that the information relating to the source protection of drinking water is both certain and sufficient in establishing that SPZs with associated regulatory provisions are an appropriate way of achieving the Change 9 Objectives. In regard to certainty, the mapped SPZs are based on modelled data, and although noted as being conservative, provide sufficient certainty to necessitate acting to protect the groundwater source of the Registered Drinking Water supply to a large proportion of the Hawke's Bay Region's total population (76%<sup>142</sup>).

As such there is little risk of acting, but the risk of not acting is to leave the drinking water source that serves a population of some 116,000 people subject to contamination risk, including from currently permitted activities.

#### 8.8.9 Conclusion

This above assessment demonstrates that the proposed provisions, including policies 6, 7 and 8, the determinative rules, the compliance check rules and the rules including additional matters for assessment relating to protecting the source water of Registered Drinking Water Supplies, are the most appropriate for achieving the objectives of Change 9.

<sup>141</sup> Tonkin & Taylor Report, *Source protection zones for public supply bores*, October 2018 (Page 11).

<sup>142</sup> *Drinking Water Source Protection – Draft Regulatory Provisions for TANK Catchments – Draft for Discussion*, Good Earth Matters, June 2018, (page 7)

