Meeting of the Regional Planning Committee

Date: Tuesday 14 August 2018

Time: 9.00am

Venue: Council Chamber
Hawke's Bay Regional Council
159 Dalton Street
NAPIER

Attachments Excluded From Agenda

Draft V7; TANK Plan Change

TANK PLAN CHANGE – DRAFT PLAN REVIEW

Editor: Mary-Anne Baker

Date: August 2018

Draft Version	Sent to	Issued	Comments incorporated
V3.0	TANK Members	27 February 2018	VC, TPG,
V4.0	TANK members	31 May 2018	HBRC Editing Meetings 38/39 Meeting 40
V.5	TANK Members	27th June	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)

TANK Plan Change ('PC9') [1]

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 Tutaekuri, 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. (sec 32 report to address where RPS related issues may need resolving)[2].

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

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

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

Mana 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

[1] This is still subject to;- consistency of x-references, - use of acronyms, - layout and numbering and sub-numbering - definitions (new terms and amending existing) and what is in the plan change and subject to submissions and what is supporting text or companion narrative/explanation to explain and account for collaborative nature of this Plan Change process.

[2] At this stage the TANK plan change is a package of amendments to the regional plan parts of the RRMP - and no changes to the RPS (or RCEP) are currently anticipated although some are likely to be required as a consequence.

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.

Consensus

Note that consensus has not been reached on some aspects of this Plan Change through this collaborative decision making process. This final draft to the RPC indicates where consensus was not achieved and the nature of the outstanding contest.

Areas of disagreement will be identified and reported to the RPC who will then make a final decision on this draft Plan Change. (These parts of this plan change are identified by shaded text boxes.)

WATER MANAGEMENT OVERVIEW

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

The process requires that attributes applicable to each value are identified and that attribute states are defined. This produces several readily measured and monitored water quality and quantity parameters. Most of these already form the basis of HBRC's State of the Environment Monitoring programme. This plan change process has also identified gaps in the information databases that could be developed to better inform future decision making including those focussing specifically on mātauranga Māori and local scale monitoring at a sub-catchment scale as part of a collective approach to meeting water quality objectives.The TANK Plan Change gives effect to the policies including the values and uses specified in Table 1 of the RPS (PC5) and has further incorporated Māori

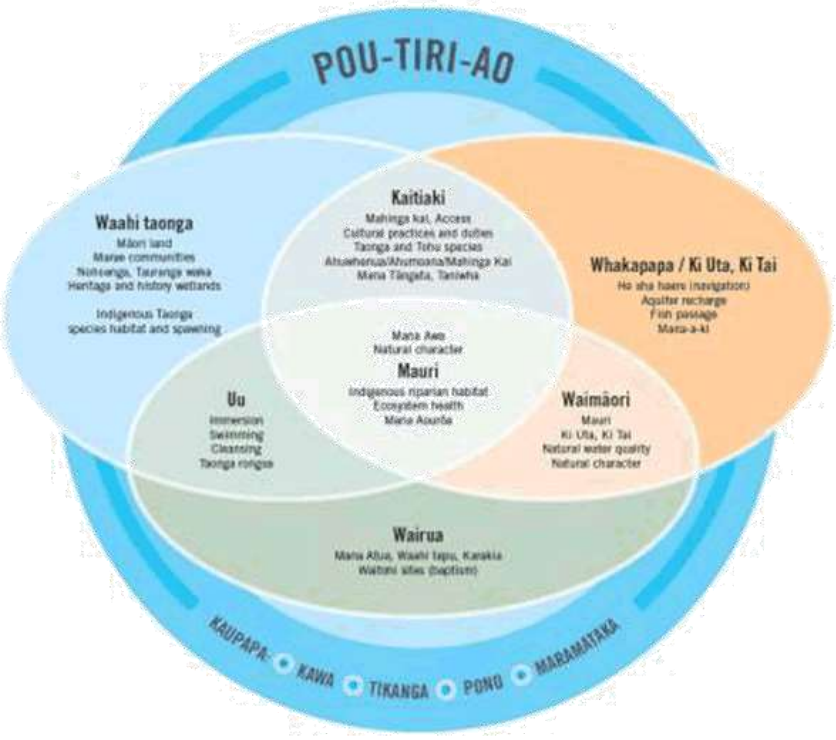


Figure1; Wariu (value) groups and aspects for management in the Ngaruroro Catchment

values for which all waterbodies in the TANK catchment area are to be managed and this is illustrated by Figure 1. The RPS table has been supplemented by both a 'mountains to the sea' Ki Uta ki Tai approach, and by the more spiritual relationships and kaitiakitanga responsibilities of local tangata whenua encompassed in the Te Iho Matua to Te Aho Matua, Mana Atua *heavens to the earth* organisation of tangata whenua values. These values are described in the reports for the Ngaruroro, Tutaekuri 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.

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

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

Some existing land and water use practices can affect the mauri or ecosystem health. Some of the effects also arise from activities and events that occurred decades in the past, including through vegetation clearance, floods and flood protection, river diversions, wetland drainage and earthquakes. Changes to landscape, its waterbodies and vegetation have had enduring adverse effects on tangata whenua cultural practices and their role as kaitiaki.

The Plan focuses on the values for which water is to be managed by the setting of objectives, limits and other management measures. It also acknowledges the wider Māori perspectives of kawa, kaupapa and tikanga that support Māori values for water and its management and ensures the outcomes that are being sought are consistent with those cultural principles and approaches. The relationship between values for which water is to be managed and the Māori culture and traditions in relation to freshwater management are expressed in the following diagram.

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

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

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

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

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

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

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

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

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

There is a need to establish flow management regimes and allocation limits to guide the abstraction of water so that appropriate levels of protection for mauri and ecosystem health are provided while acknowledging and providing for the practical needs of the community for water at reasonable reliability of supply.

For some water bodies, flooding and drainage management activities as well as abstractive uses of water have resulted in significant adverse effects on aquatic ecosystems and instream values in the Heretaunga Plains where surface water flows and water quality, especially in summer, are not sufficient to ensure ecosystem health.

Ngaruroro/Tutaekuri flows and allocations still to be confirmed.

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

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

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

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

Issue 5: Water Demand

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

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

Issue 6: Balancing Costs and Timeframes

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

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

Issue 7: Understanding TANK Freshwater Resources

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

In future, technology land and water practices and information availability are likely to change, both increasing understanding of 'state' and impacts and also improving management and mitigation responses. The scale of information collection is also likely to change as more focussed approaches to water management are used at a sub-catchment or marae scale.

Issue 8: Accounting for Predicted Climate Change

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

HBRC is required to have particular regard to the effects of climate change when managing the use, development, and protection of natural and physical resources.

DRAFT TANK Plan Change ('PC9')

TANK OBJECTIVES

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

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

Objective 2 *Land and water use, contaminant discharge and nutrient loss activities are carried out so that the quality of the TANK freshwater bodies is maintained where objectives are currently being met, or is improved in degraded waterbodies so that they meet water quality attribute states in Schedule 1 by 2040 provided that:*

a) *For any specific water body where the attribute state is found to be higher than that given in Schedule 1, the higher state is to be maintained and*
b) *Maintenance of a state is at the measured state[4].*

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

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

[3] From Objective AA and Policy AA in NPSFM

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

Schedule 1; Freshwater Quality Objectives

Water quality attribute	Surface WQ management unit[1]	Target/Limit [2]	Application	Critical Value [3]	Also protects value
Water clarity (m)	1	≥ 5 m	Median, All flows	Trout fishery	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
	2	≥ 1.6 m		Recreation	
	3	≥ 1.6 m			
	4	≥ 1.6 m			
Turbidity (NTU)	1	≤ 0.7	Median, at < median flows	trout fishery	Recreation, ecosystem health, UU, ecosystem health, kaitiakitanga, waimaori, natural character, mauri, domestic and farm water supply
	2	≤ 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.
	3	≤ 4.1			
	4	≤ 5.6			
Deposited sediment (%)	1	< 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
	2	< 20 %		Ecosystem health (Biodiversity (MCI))	
	3	< 20 %			
	4	< 20 %			
Deposited sediment (rate)	5	< 3mm p.a. accumulation rate	Annual average	Estuary ecosystem health	Recreation, natural character, mahinga kai

Periphyton biomass (mg/m^2)[4]	2	>50 - <120 mg/m^2 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)	1	≤ 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/hapu, indigenous biodiversity abstractive uses including stock drinking
	2	≤ 40 %			
	3	≤ 40 %			
Periphyton cover (seasonal max, %PeriWCC)	1	≤ 30 %	Monthly observations, 1. Nov - 30.Apr.	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
	2	≤ 30 %			
	3	≤ 30 %			
Cyanobacteria (benthic cover %)[5]	All	< 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
Macrophytes (max %CAV)	4	≤ 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)	1	≥ 120		Ecosystem health	

	2	≥ 100	average, flow < median		Waimaori, natural character, mauri, ecosystem health, kaitiakitanga, whakapapa, taonga/tohu species habitat and spawning, Indigenous biodiversity, trout
	3	≥ 100			
	4	≥ 90			Waimaori, natural character, mauri, ecosystem health, kaitiakitanga, whakapapa, indigenous biodiversity and taonga/tohu species habitat and spawning
DIN (mg/L)	1	< 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
	2	< 0.15 mg/L			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
	3	< 0.3 mg/L			Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, abstractive uses, drinking water
	4	< 0.444 mg/L		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, industrial and commercial use
DRP (mg/L)	1	< 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
	2	< 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

	3	< 0.015 mg/L		Algal growth	Estuary ecosystem health, recreation, uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, abstractive uses
	4	< 0.015 mg/L		Estuary ecosystem health	Uu, waimaori, mauri, aquifer recharge, mahinga kai, taonga/tohu species, natural character, ecosystem health, abstractive uses
Nitrate (mg NO3-N/L)	1	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
	2				
	3				
	4	median ≤ 2.4 / 95th%ile ≤ 3.5			
Ammonia (mg NH4-N/L)	1	median ≤ 0.03 / max ≤ 0.05	Annual median, annual max unionised ammonia based on pH8 at 20^0, 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
	2				
	3				
	4				
E. coli (cfu/100 ml)	1	<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, ahuwhenua 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
	2	<5% over 540/100ml median < 130/100ml			
	3	<5% over 540/100ml median < 130/100ml			
	4	<5% over 1000/100ml median < 130/100ml			
Dissolved oxygen (mg/L or %) from continuous data	1	≥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
	2				
	3				

	4	≥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	1	≤ 21°C	Cox-Rutherford-Index from continuous measurements, hottest 5 consecutive days, all flows	Ecosystem health	Waimaori, natural character, mauri, kaitiakitanga, whakapapa, taonga/tohu species, ahumoana, ahuwhenua mahinga kai indigenous biodiversity, trout
	2	≤ 23°C			
	3	≤ 22°C			
	4	≤ 22°C			Waimaori, natural character, mauri, kaitiakitanga, whakapapa, taonga/tohu species, ahumoana, ahuwhenua mahinga kai Indigenous biodiversity
Placeholder for mātauranga Māori attributes that are yet to be developed					
Note 1; Management units for rivers. Details for wetland and lake water quality targets and limits still to come Note 2; Where the numeric number is currently being met it is a limit, and if it is not currently being met then it is a target. Note 3; The critical value is the value most sensitive to the attribute state (has the highest water quality demand for that attribute). If the needs of the critical value are met, the needs of other values are also met. Note 4; The council collects information about the periphyton biomass at a limited number of sites. It also has extensive data on periphyton cover, including cyanobacteria at all SOE sites Note 5; MfE Alert-level framework: New Zealand guidelines for cyanobacteria in recreational fresh waters: Interim guidelines (2009)					

Objective 5 *In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking, using damming and diverting of freshwater is carried out in the* ***Ahuriri*** *freshwater catchments so that the mauri, water quality and water quantity are maintained and enhanced where necessary to enable;*

a) Ahuriri estuary sediments to be healthy and not accumulate excessively;
b) healthy ecosystems that contribute to the health of the estuary;
c) healthy and diverse indigenous aquatic plant, fish and bird populations;
d) people and communities to safely meet their domestic water needs[5];
e) primary production water for community social and economic well-being; and
f) contribution to the healthy functioning of the Ahuriri estuary ecosystem and enable people to safely carry out a wide range of social, cultural and recreational activities including swimming and the collection of mahinga kai in the estuary.

Objective 6*:* *In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking, using damming and diverting of freshwater is carried out in the* ***Ngaruroro River****, 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 Ngarurororo;
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 water flows and water quality in the connected Heretaunga Plains Aquifers;
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 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* ***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:*

[5] the objective is more general and not specifically targeting SPZs and municipal supplies at this level. People also expect to access water for domestic supply and the objective must be to protect groundwater in a more general sense. The SPZs are a more targeted tool/method that focuses on one aspect of water quality protection in relation to the risk to larger communities

a) *healthy ecosystems;*
b) *healthy and diverse indigenous aquatic and bird populations especially , whitebait, torrent fish, macroinvertebrate communities and a healthy trout fishery;*
c) *people to safely carry out a wide range of social, cultural and recreational activities, especially swimming and boating;*
d) *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.*

Objective 8 *In combination with meeting the water quality states specified in Schedule 1, the use and development of land, the discharge of contaminants and nutrients, and the taking, using damming and diverting of freshwater is carried out in the **Karamu and Clive Rivers** 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;*
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.*

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;*

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
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.*[6]

[6] Includes waterbodies like springs

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

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
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;

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

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

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

Objective 13: *Subject to limits, targets and flow regimes established to meet the needs of the values for the water body, water quantity allocation management and processes ensure;*[7]

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;

[7] Amendments to reflect the water allocation policies and better reflect how the policies provide for different end uses.

Objective 14:	No consensus; Item 1 Objective 7 d) (refer also Policy 30)
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.*	Item d) in this objective is not agreed with by some stakeholders including the Treaty Partners Group (TPG). Policy 30 is also specifically not agreed with.

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

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

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

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

Objective 16: *The effects of climate change in respect of each of the following are taken 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).

POLICIES

SURFACE WATER AND GROUNDWATER QUALITY MANAGEMENT

Priority Management Approach

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

2. In the **Clive/Karamu Rivers** and their tributaries, in addition to Policy 1
    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.

3. In **lakes and wetlands** in the TANK Catchments, in addition to Policy 1;
    a) work at a catchment scale with land owners in the wetland or lake catchment (consistent with policy 19) 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
        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 Tutaekuri Rivers** and their tributaries, in addition to Policy 1;
    a) improve water clarity and reduce deposited sediment by reducing the amount of sediment being lost from land;
    b) reduce risk of proliferation of algae by reducing nutrient losses from land, including by reducing phosphorous loss associated with sediment;
    c) improve ecosystem health and water quality by excluding stock from surface water bodies and improving riparian management.

5. In the tributaries of the **Ahuriri Estuary**, in addition to Policy 1;

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

6. For the groundwater of the Heretaunga Plains and surface waters used as source water for Registered Drinking water Supplies, in addition to Policy 1;
    a) to define the spatial extent of Source Protection Zones for Registered Drinking Water Supplies by ~~an appropriate~~ defined technical methods[8] or
    b) Where a Source Protection Zone has not been defined, to apply a specified default radius for a Registered Drinking Water Supply[9].
    c) to regulate activities within Source Protection Zones that may actually or potentially affect the quality of the source water or present a risk to the supply of safe drinking water because of;
        (i) direct or indirect discharge of a contaminant to the source water including by overland flow or percolation to groundwater, especially in relation to pathogens;
        (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
        (iii) potentially impacting on the level or type of treatment required to maintain the safety of the water supply
        (iv) shortening or quickening the connection between contaminants and the source water, including damage to a confining layer as a result of earthworks or the drilling and maintenance of bores.
        (v) in the case of groundwater abstraction, the drawdown of the water levels so that…..a question about what aspect of the water take needs to be managed – may be detailed in the tech report?

7. The Council will, when considering applications to discharge contaminants or carry out land use activities within;
    a) the specified default radius for Registered Drinking Water Supplies, take into account possible contamination pathways and risks to the quality of the source water for the water supply,
    b) a Source Protection Zone, avoid or mitigate risk of contamination from the activity of the source water for the water supply by taking into account;
        (i) the amount, concentration and type of contaminants likely to be present as a result of the activity or in any discharge;
        (ii) the potential pathways for those contaminants, including any likely or potential preferred pathways;
        (iii) the mobility and survival rates of any pathogens likely to be in the discharge or arising as a result of the activity;

[8] terms that probably need to be defined are all underlined
[9] More clarity needed about the way in which this default radius is defined. It would be helpful if any default radius areas are mapped so that application of the rules and farm plans can be made certain.

(iv) any risks the proposed land use or discharge activity has either on its own or in combination with other existing activities, including as a result of non-routine events;
(v) drawdown effects and their management
(vi) the effectiveness of any mitigation measures to avoid or mitigate risk of contaminants entering the source water and the extent to which the effectiveness of the mitigation measure can be verified
(vii) notification, monitoring or reporting requirements to the Registered Drinking Water Supplier

8. To work with the Napier City Council, Hastings District Council, Hawkes Bay District Health Board and Drinking Water Assessors to;
    a) implement a multi-barrier approach to the delivery of safe drinking water for Registered Drinking Water Supplies, through the consideration of source protection measures, water treatment and supply distribution standards and;
    b) understand the nature and extent of the water resources used to supply communities, their connectivity with other waterbodies and their recharge sources;
    c) 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;
    d) maintain shared databases of activities that have the potential to adversely affect quality of water used for community supply;
    e) develop solutions that address risks to water quality including wastewater reticulation solutions in Source Protection Zones.

RIPARIAN MANAGEMENT

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

10. When making decisions about riparian land management in accordance with Policy 9, to 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) to provide for the values (a) – (h) in policies 9 and 10 by;
    a) Working with industry groups and land owner collectives to identify where riparian management is to be improved;
    b) Providing information about appropriate riparian planting that assists in meeting the values;

c) Regulating cultivation, stock access and indigenous vegetation clearance activities that have a significant adverse effect on functioning of riparian margins in relation to water quality and aquatic ecosystem health in adjacent waterbodies;
d) Providing funding assistance for riparian vegetation improvements;
and
e) when making decisions on applications for resource consent to;
(i) take into account benefits arising to the values in Policy 9 as a result of the activity;
(ii) consider whether to waive the fees and charges required to process the application where;
1. there is significant public benefit from the activity or the nature and scale of the activity results in significant ecosystem benefits; and
2. the activity is not a requirement of any other resource consent.

WETLAND MANAGEMENT

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

13. The restoration and extension of natural wetlands and the *reinstatement or creation* of additional wetlands will be encouraged and supported 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 by;
a) Identifying priority areas where wetland management and extent can be improved;
b) Providing information to landowners about wetland values and their management;
c) Providing funding assistance for wetland protection and for construction of new wetlands;
d) Targeting resources where multiple objectives can be met;
and
e) when making decisions on applications for resource consent to;
(i) take into account benefits arising to the values in Policy 12 as a result of the activity;
(ii) consider whether to waive the fees and charges required to process the application where;
1. there is significant public benefit from the activity or the nature and scale of the activity result in significant ecosystem benefits; and
2. the activity is not a requirement of any other resource consent.

PHORMIDIUM MANAGEMENT

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

c) Supporting national investigations into the incidence of toxic phormidium, the reasons for its establishment and measures to reduce the incidence;
d) reducing nutrient and sediment inputs in accordance with Policies 15 and 16;
e) maintain flushing flow
f) ensuring the public has information about phormidium risk.

MANAGING ADVERSE EFFECTS FROM LAND USE ON WATER QUALITY (Diffuse Discharges);

Adaptive Approach to Nutrient and Contaminant Management

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

16. The Council will achieve the freshwater targets in Schedule 1 by; a) developing nutrient loads and limits for nutrient allocation if the management framework in Policy 15 is not leading to improved attribute states by the time this plan is reviewed; b) regulating land use change where there is a significant increased risk of nitrogen loss; c) gathering and assessing information about environmental state and trends and the impact of land use activities on these; d) working with industry groups, landowners and other stakeholders to undertake research and investigation into; (i) nutrient pathways, concentrations and loads in rivers and coastal receiving environments; (ii) nutrient uptake and loss pathways at a property scale; (iii) measures to reduce nutrient losses at a property as well as catchment scale including those delivered through industry programmes.	**Non-Consensus Item 2** **Policy 16, clause (a)** Some stakeholders seek that there is commitment to develop a property scale nutrient allocation regime sooner

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

Sediment Management

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

Land Use Change and Nutrient Losses

19. To remedy or mitigate the potential impact of diffuse discharge of nitrogen on freshwater quality objectives by regulating land use changes that modelling indicates are likely to result in increased nitrogen loss (modelled on an annual, whole of property or whole of farm enterprise basis) and in making decisions on resource consent applications, the Council will take into account;
    a) Whether freshwater quality objectives or targets are being met in the catchment where the activity is to be undertaken;
    b) Where any relevant TANK Industry Programme or Catchment Collective is in place the extent to which the changed land use activity is consistent with the Industry Programme or Collective outcomes, mitigation measures and timeframes;
    c) Any mitigation measures required, and timeframes by which they are to be implemented that are necessary to ensure the actual or potential contaminant loss occurring from the property, in combination with other contamination losses in the catchment will be consistent with meeting freshwater quality objectives, including performance in relation to industry good practice, efficient use of nutrients and minimisation of nutrient losses;

    and to avoid land use change that will result in increased nitrogen loss and contributes to limits and targets in Schedule 1 for dissolved nitrogen not being met.

Stock Exclusion

20. 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 when making decisions about Farm Environment Plan requirements to take into account the following matters;
    a) assessment of sources, scale and significance of adverse effects of sediment, phosphorus, nitrogen and bacterial inputs to the water body that could effectively or efficiently be reduced by stock exclusion, bridging or culverting;
    b) identifying whether there are alternative measures to meet water quality outcomes and improve ecosystem health, including by managing bank erosion or reducing sediment losses to water in contributing areas, altering land uses, or providing reticulated water for stock;
    c) whether stock exclusion is practicable in the circumstances including in relation to;

(i) total costs of stock exclusion measures compared to expected water quality benefit assessed in (a) and other possible adverse effects including stock welfare;
(ii) technical or practical challenges of any works required for stock exclusion to be effective;
(iii) potential costs and benefits provided by alternative measures compared to stock exclusion.

Industry Programmes and Catchment Management

21. The Council will support the establishment and operation of Industry Programmes and Catchment Collectives and;
    a) ensure any relevant information or expertise for making sustainable land management decisions is available to land managers
    b) support local investigation and water monitoring programmes where information gaps exist
    c) support development and use of catchment scale models that assist in identification and management of critical source areas
    d) support catchment and farm scale decision making to meet freshwater objectives and encourage local solutions and innovative and flexible responses to water quality issues
    e) work with water permit holders to encourage and support establishment of catchment collectives that address both freshwater quality objectives and stream flow management through environmental management programmes as specified in Schedule 5 and within the timeframes specified in Schedule 3.

22. The Council will continue to work with landowners, industry groups and other stakeholders to manage land and water use activities so that they meet objectives for freshwater/aquatic ecosystems by;
    a) further supporting the development of **Industry Programmes** that contribute to meeting applicable freshwater objectives by;
        (i) identifying practices that contribute to meeting applicable freshwater objectives;
        (ii) specifying timeframes for completion or adoption of measures to mitigate contaminant losses;
        (iii) ensuring individual performance under an Industry Programme is monitored;
        (iv) providing annual reports to the Council on progressive implementation of measures identified in Industry Programmes established under Schedule 5 and progress towards meeting applicable objectives for water quality;
        (v) promoting adoption of good industry practice;
        (vi) ensuring that Industry Programmes are consistent with the requirements of Schedule 5;
    b) supporting landowners to establish **Catchment Collectives** to develop and implement environmental management plans that contribute to meeting applicable freshwater objectives by;
        (i) identifying and adopting measures at a property scale and collectively with other land managers that reduce contaminant losses or remedy or mitigate the effects of land use on freshwater objectives;
        (ii) specifying timeframes for completion or adoption of measures to mitigate contaminant losses;
        (iii) ensuring individual performance under a catchment collective is monitored;
        (iv) providing annual reports to the Council on progressive implementation of measures identified in landowner collectives established under Schedule 5 and progress towards meeting applicable objectives for water quality;
        (v) promoting adoption of good agricultural practice;

(vi) ensuring programmes prepared by a collective is consistent with the requirements of Schedule 5;

c) Approving any Landowner Collective or Industry Programme developed under Schedule 5;

d) Auditing Landowner Collective or Industry Programmes prepared and approved under Schedule 5 including auditing of member properties.

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

Management and compliance.

24. Where individuals are members of a **Catchment Collective** or **Industry Programme** but do not undertake their activity in accordance with the approved plan prepared in accordance with Schedule 5, or do not follow the agreed terms of membership the Council will;

a) provide a conflict resolution service;

b) where an individual is no longer, or is deemed through conflict resolution processes not to be, a member the Council will;

(i) require the development of a farm plan for that property within 6 months or;

(ii) require an application for a land use consent to be made; and

c) take appropriate enforcement action.

Timeframes

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
Stock and Riparian Land Management			
1; Stock exclusion and riparian planting	Stock excluded from rivers in flat and rolling hill country Riparian margins planted	Stock excluded by 2023	Km of stream with stock exclusion 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
Wetlands			

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
Nutrient Management			
5; Nutrient management	Nutrient management plans	According to priority set out in Schedule 3	Number of properties subject to nutrient plan

STORMWATER MANAGEMENT -

New Urban Infrastructure

26. 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 reduce or remedy the effects of stormwater quality and quantity on aquatic ecosystems and community well-being by;
    a) Adopting an integrated catchment management approach including through global consents for urban networks that include management of all piped and open water courses and rivers within a catchment;
    b) adopting a good practice approach to stormwater management including adoption of Low Impact Design for stormwater systems, where practicable;
    c) adopting a staged approach to meeting water quality objectives (where they are degraded by stormwater) and requiring identification of measures that ensure stormwater discharges will enable at least the 80th percentile level of species protection in receiving waters by 2023 and to 95th percentile level species protection by 2040;
    d) specifying design standards to achieve freshwater objectives in District Plan rules and TLA bylaws;
    e) requiring stormwater to be discharged into a reticulated system or TLA managed stormwater network where such a system is available;
    f) increasing retention or detention of stormwater, while not creating flood hazards;
    g) taking into account site specific constraints such as in areas with high groundwater;
    h) 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;
    i) developing advice about good stormwater management options including through HBRCs Waterways Guidelines;
    j) accounting for the effects of climate change in providing for new and upgrading existing infrastructure;
    k) encouraging through education and public awareness programmes greater uptake and installation of measures that reduce risk of stormwater contamination.

Source Control

27. HBRC with the Napier City and Hastings District Councils will reduce sources of stormwater contamination by;

a) Specifying requirements for design and installation of stormwater control on sites where there is a risk of stormwater contamination, either directly to freshwater or indirectly via stormwater networks or drainage, or to groundwater via discharge to land (including by the installation of SW interception devices);
b) Requiring good site management on sites where there is a risk of stormwater contamination due to the usage or storage of contaminants of concern;
c) Restricting activities that result in water quality standards not being able to be met.

Dealing With The Legacy

28. HBRC with the Napier City and Hastings District Councils will adopt a priority approach to managing stormwater contamination and aquatic ecosystem improvements by;
    a) Requiring stormwater network discharges to meet management objectives for freshwater and estuary health through resource consent conditions that prioritise and retrofit in a way that recognises affordability for ratepayers, including through;
        (i) Application of the Stream Ecological Valuation methodology;
        (ii) Installation of treatment devices within the drainage network;
        (iii) Stream planting/re-alignment for aquatic ecosystem enhancement;
        (iv) Wetland creation and other opportunities for increasing stormwater infiltration where appropriate;

    and

    b) Requiring good site management by existing and new industrial and commercial sites with a high risk of stormwater contamination and those in the high priority areas of;
        (i) the Ahuriri catchment;
        (ii) the Karamu River and its tributaries;
        (iii) land over the unconfined aquifer;

    so that all at risk activities are subject to a site management plan within five years of the operative date of this plan.

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

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

AHURIRI CATCHMENT –

30. The Council will support the wider community commitment to the Ahuriri Estuary Integrated Catchment Management Plan (ICMP) including from Mana Ahuriri, Napier City Council, Department of Conservation by adopting measures to improve the quality of freshwater entering the Ahuriri Estuary and to carry out

investigations to help better understand processes and functions occurring within the estuary and its connected freshwater bodies.

MONITORING and REVIEW

31. To recognise and support hapū and landowner involvement in local scale monitoring and monitoring according to mātauranga Māori to assess ecosystem health and water quality in relation to identified values and its contribution to:
    a) understanding local ecosystem health, mahinga kai and mauri especially water quality,
    b) enabling kaitiaki and resource managers' responsibilities for sustainable freshwater management to be met
    c) assessing effectiveness of mitigation measures adopted to meet freshwater objectives
    d) understanding state and trends of local water quality
    e) adding to the regional knowledge about environmental state and trends

    by

    f) developing protocols and procedures for monitoring appropriate to the purpose of the monitoring
    g) providing assistance and advice
    h) supporting the provision of monitoring materials
    i) collating and reporting on data as appropriate.

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. To assist with monitoring the effectiveness of the TANK water quality management policies and rules and to assist in making decisions about reviewing or changing this management framework, the Council will:
    a) Continue to monitor instream water quality and review and report on the progress towards and achievement of the water quality objectives in Schedule 1 and according to Objectives 2 and 3 in its regular State of the Environment monitoring;
    b) Monitor and report on the state of riparian land and wetlands, carry out regular ecosystem habitat assessments including through the application of mātauranga Māori tools and approaches;
    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) Will commence a review of these provisions within ten years of <operative date> in accordance with section 79 of the RMA.

MINIMUM FLOW REGIMES GROUNDWATER LEVELS AND ALLOCATION LIMITS;

Heretaunga Plains Freshwater Quantity Management Unit

Policy 34; Heretaunga Plains Water Allocation	Non-consensus items 3, 4
34. The Council recognises the actual and potential adverse effects of groundwater abstraction in the Heretaunga Plains Water Management Zone on; a) Groundwater levels and aquifer depletion; b) Flows in connected surface waterbodies; c) Flows of the Ngaruroro River; d) Groundwater quality through risks of sea water intrusion and water abstraction; and will carry out the following management steps to avoid further adverse effects; e) Adopt an interim groundwater allocation limit of 90 Mm^3 per year; f) Restrict new allocations of groundwater above water use levels covered by clause (h); g) Allow site to site transfers of allocated water provided they do not result in an increase in water use above those covered by clause (h); h) For applications in respect of existing consents due for expiry or when reviewing consents to allocate water on the basis of actual and reasonable use that reflects the existing land and water use investment authorised up to August 2017 (except as provided by urban water policy 38) and; (i) Allocate groundwater on the basis of the annual water demand; (ii) When establishing the volume allocated to each consent, take into account water meter information to determine actual and reasonable use, existing infrastructure	Item 3; Clause f) A complete prohibition is considered to be too strong by some stakeholders as it does not acknowledge the fact that there may be very justified reasons for someone seeking allocations that we cannot foresee at this point in time. A non-complying activity status could be more appropriate which means that to be granted resource consent any activity would have to pass the gateway test of Section 104D, (effects must be minor and the activity not contrary to policies and objectives). This would recognise the uncertainties in this stage of the limit setting process and it may be prudent to allow a pathway for such activities to be assessed on their merits . See also policies that allow for transfers if better technical information is provided in relation to zone 1 boundaries and transfers to groundwater take from surface water if there is a net benefit to flows and levels. Item 4 Clause h) The effect of the policy for re-allocation on the basis of existing land use/investment is not supported by all TANK members. The limit in water use at levels reflected by existing land use is consistent with Section 124 of the RMA that also seeks to protect existing investment. However it has adverse effects on landowners with low water use crops or no water permit as it reduces land use flexibility and has adverse effects on land value. This aspect will be further reported on.

investment ,water sharing arrangements and crop rotation/development phases and the effects of previous water bans on actual water use. (iii) Allocate water for irrigation based on a reliability standard that meets demand 95% of the time; (iv) Require water meters to be installed for all water takes authorised by a water permit provided that telemetry will not normally be required where a take has a consented rate of take of less than 5 L/sec.	

Policy 35 – Flow enhancement	Non-consensus Item 1a
35. The Council will remedy or offset if remedying is not practicable, the stream depletion effects and effects on tikanga Māori of groundwater takes in the Heretaunga Plains Water Management Zone on the Karamu River and its tributaries by; a) developing stream flow and habitat enhancement schemes that; (i) improve stream flows in lowland rivers where groundwater abstraction is depleting stream flows and; (ii) improve oxygen levels and reduce water temperatures; and to; b) Consult on the design and management of the flow enhancement regime; c) Assess the contribution to stream depletion from groundwater takes; and i. Impose costs equitably on consent holders based on the level of stream depletion while providing for exceptions for the use of water for essential human health; and ii. Work with permit holders to progressively develop and	This policy is not agreed with by Forest and Bird representatives or by the Treaty Partners Group. See discussion in non-consensus item 1

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

36. To re-allocate water to holders of permits to take and use water in the Heretaunga Water Management Zone issued before the <plan notification date> according to the new plan policies and rules either;
    a) upon expiry of the consent; or
    b) in accordance with a review of all applicable permits within ten years of <the operative date>;

    whichever is the sooner.

37. After water has been re-allocated and consents reviewed in accordance with Policies 31 and 33, the Council will commence a review of these provisions within ten years of <operative date> in accordance with section 79 of the RMA and will determine;
    a) The amount of water allocated in relation to the interim allocation limit;
    b) The total annual metered groundwater use for the HPWMZ during the ten years prior to the time of review;
    c) if any changes in the relationship between groundwater abstraction and the flows of rivers and groundwater levels have occurred;
    d) The degree of success of any stream flow enhancement schemes in relation to specified objectives for water quality and minimum flows;

    And will;
    e) assess the effects of the groundwater takes on the freshwater objectives;
    f) assess the effectiveness of improved riparian management and wetland creation in meeting freshwater objectives;
    g) review the appropriateness of the allocation limit in relation to the freshwater objectives;
    h) develop a plan[10] change to ensure any over-allocation is phased out.

38. To investigate the remedying of 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;

[10] if there is still over-allocation, phasing this out would likely require claw-backs and if these are going to be done, there needs to be an opportunity for the wider community to make a decision about the criteria that would be used to do them, and this can really only be done as part of a plan change process

a) further investigating the environmental, technical and economic feasibility of a water storage and release scheme to off-set the cumulative stream depletion effect of groundwater takes
b) if feasible, to develop options for funding, construction and operation of such a scheme including through a targeted rate and
c) if not, to review alternative methods and examine the costs and benefits of those.

Surface Water Low Flow Management

Flow management regimes	Non-consensus Items 5 and 6
39. To 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; a) For the **Ngaruroro River** … b) for the **Tūtaekurī River…** c) 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. d) requiring water meters to be installed for all water takes authorised by a water permit in zones that are fully or over-allocated provided that telemetry will not normally be required where the consented rate of take is less than 5 L/sec ensuring water allocation from tributaries is accounted for in 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. e) offsetting the stream depletion effects of groundwater takes, that were not previously considered stream depleting, on river flows for groundwater abstraction in Zone 1 by managing them as if they were in the Heretaunga Plains Water Management Zone and i. requiring contributions to lowland stream enhancement programmes at a rate equivalent to the stream	There was no consensus over the flow management regimes that should be adopted for either the Ngaruroro and Tūtaekurī Rivers. This will be further reported on.

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 e)(i) to lowland stream enhancement and iii. providing for further technical assessments to determine the extent of stream depletion effect	

Over-Allocation

40. Except as provided by Policies 30 and 43, when establishing limits for permitted water takes and when making decisions on resource consent applications where water has been allocated in excess of the specified allocation limits the Council will phase out over-allocation by;
    a) Preventing[11] any new allocation of water (not including any reallocation in respect of permits issued before <date of notification> and those covered by policy 35);
    b) For applications in respect of existing consents due for expiry or when reviewing consents, to;
        (i) allocate water according to demonstrated actual and reasonable need and history of use within the 10 years prior to <the date of notification>;
        (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 the efficiency relative to industry good practice standards;
        (iii) limit consent durations to 15 years according to specified water management zone expiry dates. Future dates for expiry or review of consents within that catchment are every 15 years thereafter. Consents granted within three years prior to the relevant common catchment expiry date may be granted with a duration to align with the second common expiry date, except where the application is subject to section 8.2.4 of the RRMP)
        (iv) provide for, within the duration of the consent, staged reductions in water take and application of minimum flow requirements where hardship can be demonstrated;[12]
    c) imposing conditions on review of existing consents requiring efficiency gains to be made, including through altering the volume, rate or timing of the take and requesting information to verify the efficiency relative to industry good practice standards;
    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 or promoting water augmentation/harvesting;

[11] See non-consensus item 2. There is a similar lack of support for a prohibited status for surface water takes above an allocation limit

[12] This additional policy provision is linked to the discretionary TANK 9 rule and allows a water user to plan staged compliance with the flow and allocation limit requirements over the term of the permit and not be immediately and possibly unreasonably faced with the prohibited activity. It supports the prohibited activity because hardship will need to be proven and in other circumstances a firm limit is established. The prohibited activity is recommended because it reinforces the setting of the allocation limits and ensures the NPSFM can be effectively given effect to.

f) ensuring transfers will only be consented where the water has been used as demonstrated by water use records;
g) enabling and supporting permit holders to develop flexible approaches to management and use of allocatable water within a management zone including through catchment collectives, water user groups , consent sharing or global water permits;
h) enabling and supporting the rostering of water use or reducing the rate of takes in order to avoid restrictions at minimum or trigger flows;

GENERAL WATER 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 water permit holders to work collectively to maximise the use of allocated water including by consent sharing and collaborative approaches including use of water user committees to meet minimum flow requirements
    d) support flexible management of water by permit holders so that the allocatable water can be used efficiently and within permissible levels.
    e) 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. When considering applications for resource consent, to ensure water is allocated and used efficiently by:
    a) ensuring that the technical means of using water are physically efficient through:
        (i) allocation of water for irrigation end-uses based on soil, climate and crop needs;
        (ii) Requiring the adoption of good practice water use technology and processes that minimise the amount of water wasted; and
        (iii) the use of water meters;
    b) Using the IRRICALC water demand model if available for the land use being applied for (or otherwise by a suitable equivalent approved by Council) to determine efficient water allocations for irrigation uses.
    c) To allocate water for irrigation on the basis of a minimum efficiency standard of 80%[13]
    d) To require all non-irrigation water takes (except as provided by Policy 47 for municipal 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.

[13] Could indicate specific date such as by 2026 to provide all irrigators with similar time frames and advance notice for ensuring system efficiency – and provides time for upgrades. Refer also to RRMP 8.2.8.

Water Use Change/Transfer

43. When considering any application to change the water use specified by a water permit, or change a 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, 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);
    d) effects of the alteration to the patterns of water use over time, including changes from seasonal use to water takes 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 (ref RPS Pol UD1);
    f) in Water Management Zones that are over-allocated, ensuring that transfers do not result in increased water use (where the transfer is of allocated but unused water);
    g) declining applications for a change of use from frost protection to any other end use.

Frost Protection

44. When considering applications for resource consent to take water for frost protection;
    a) from groundwater in the HPWMZ, to remedy or mitigate actual and potential effects of the take on;
        (i) neighbouring bores and existing water users;.
        (ii) connected surface water bodies;
        (iii) water quality as a result of any associated application of the water onto the ground where it might enter water;
        and

        to decline any applications to change the consented use of water from frost protection to any other use.

    b) from surface water to remedy or mitigate actual and potential effects of the take on;
        (i) instantaneous flow in the surface water body;
        (ii) fish spawning and existing water users;
        (iii) applicable minimum flows during November and April.

Water Allocation - Permit Duration

45. When making decisions about applications for resource consent to take and use water, to set common expiry dates for water permits to take water in each water management zone, that ensures consistent and efficient management of the resource and set durations that provide a periodic opportunity to review effects of the cumulative water use and to take into account potential effects of changes in:
    a) knowledge about the water bodies
    b) over-allocation of water
    c) patterns of water use
    d) development of new technology

e) climate change effects
f) efficacy of flow enhancement schemes and any riparian margin upgrades

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

Water Allocation - Priority

Reservation	Non-consensus item 4a
46. The Council will recognise reasonably foreseeable needs for municipal, papakainga and community water supply for human health and community well-being (excluding any provision for industrial uses that take or are supplied with water from a municipal water supply at rates more than 15m3/day) as priority uses for water available for allocation within allocation limits and:, a) will reserve any water that becomes available for allocation or re-allocation for that use; b) if no application is made or no reasonably foreseeable needs identified for this water within 5 years of it becoming available Council will not re-allocate any of the allocatable water until such time as allocation mechanisms other than first in time are provided through the RMA.	Refer also to policy 35. Decisions about priority access to water either within allocation limits or as it becomes available is subject to non-consensus by grape growers and horticultural stakeholders in relation to provision of water for primary production on versatile soils and the potential opportunities to reduce the impact of the 'actual and reasonable' re-allocation regime. This will be reported on further.

47. The Council will recognise the needs of Māori to access water for the development of Māori social, cultural and economic well-being and reserve 20% of the allocation for high flow abstraction for this end use.

48. 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 available water supplies (i.e within allocation limits or existing consents) and;
    a) allocate water for population and urban development projections for the area according to estimates provided by the HPUDS (2017) to 2045
    b) calculate water demand according to existing and likely residential, non-residential (schools, hospitals, commercial and industrial) demand within the expected reticulation areas and;
        (i) require that water demand and supply management plans are developed and adopted and industry good practice targets for water infrastructure management and water use efficiency including meeting an Infrastructure Leakage Index of 4 are met.
        (ii) seek that the potential effects of annual water volumes are reflected in level of water supply service and reliability of supply objectives in asset management plans and bylaws for water supply.

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

49. When making water shortage directions under Section 329, to provide for water uses in the following priority order;

a) water for the maintenance of public health;
b) water necessary for the maintenance of animal welfare
c) essential community well-being and health.
d) emergency water for surface water users in the Ngaruroro and Tutaekuri Rivers
e) uses where water is subject to seasonal demand for primary production
f) uses for which water is essential for the continued operation of a business, except where water is subject to seasonal demand for primary production or processing)

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

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

Takes not subject to any restrictions are:

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

WATER AUGMENTATION AND CONSERVATION-

HIGH FLOW ALLOCATION REGIME

The following two policies were previously one single policy for both types of water storage. They have been separated as they are quite different sorts of activities (but content is essentially the same.)

Adverse Effects - Water Damming

Water damming	Non-consensus item 7
50. 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;	*The level of change to the Fre_3 statistic is recognised as a measure for protecting natural river flushing functions. 10% change is widely recognised as not significantly adversely affecting the river hydrology.* *The TANK group was not in unanimous agreement about how much amendment to the flow regime of the river as a result of dams and takes to storage should be provided for.* *Some TANK group members advocate that the full amount represented by the 10% Fre_3 should be made available as it provides for future water demand and is consistent with an appropriate threshold for protection of the river ecosystem.*

(i) the uses and values for any water body identified in RPS Table 1 ; (ii) water levels and flows in connected water bodies, including lakes and wetlands (iii) water quality, including effects on temperature and management of periphyton in connected water bodies; (iv) river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat, including in relation to the storage impoundment; (v) groundwater recharge; (vi) downstream land, property and infrastructure at risk from failure of the proposed 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 54, will limit the amount of flow alteration so that the damming of surface water either on its own or in combination with other dams or water storage in a catchment does not cumulatively affect the frequency of flows above three times the median flow by more than 6.3% and provided that any dam in combination with other dams or high flow takes shall not cause changes to the river flow regime in excess of specified flow triggers.	

Adverse Effects - Water Take and Storage

Takes to storage	Non-consensus item 7a
51. When assessing applications to take water for off-stream storage and 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;	*The level of change to the Fre_3 statistic is recognised as a measure for protecting natural river flushing functions. 10% change is widely recognised as not significantly adversely affecting the river hydrology. The TANK group was not in unanimous agreement about how much amendment to the flow regime of the river as a result of dams and takes to storage should be provided for and what a high flow allocation limit should be limited to.*

b) the magnitude, frequency, duration and timing of water takes either by itself or cumulatively with other storage structures or dams, on; (i) the uses and values for any water body identified in RPS Table 1; (ii) water levels and flows in connected water bodies, including lakes and wetlands (iii) water quality, including effects on temperature and management of periphyton in connected water bodies; (iv) river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat, including in relation to the storage impoundment; (v) groundwater recharge; (vi) downstream land, property and infrastructure at risk from failure of the proposed storage structure; (vii) other water users; and will limit the amount of flow alteration so that the taking of surface water does not cumulatively affect the frequency of flows above three times the median flow in the Ngaruroro and Tutaekuri Rivers by more than 6.3% and provided that a) The high flow take ceases when the river is at or below the median flow; b) Such high flow takes do not cumulatively exceed the specified allocation limits; c) 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.	. *Modelling results were provided for allocation limits at 6 and 8 m^3/sec and these levels of abstraction impacted the Fre3 by 4.8% for a 6m^3/sec limit and 6.3% for the 8 m^3/sec limit.* *Some TANK group members advocate that the full amount represented by the 10% Fre_3 should be made available as it provides for future water demand and is consistent with an appropriate threshold for protection of the river ecosystem.* Non-consensus item 8 Requirement for any storage proposal to provide 10% of the storage volume for release and river flow enhancement. There will be further reporting on this issue.

Benefits of Water Storage and Augmentation

52. 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 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 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 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

53. 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 52 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.

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

SPECIFIC POLICIES

Paritua/Karewarewa Streams

55. The Council will recognise the connectivity between ground and surface water abstraction on the flows in the Paritua/Karewarewa Streams and their tributaries, acknowledge the contribution of flows from these streams to the flows in the Awanui Stream, Karamu River and the Heretaunga Plains Aquifer, and their importance to local marae and work with water permit holders, landowners and tangata whenua to;
    a) further refine the Heretaunga Plains Aquifer Model to improve model outputs for this catchment;
    b) investigate opportunities for wetland creation to improve hydrological functioning and water quality in the river, especially during low flows;
    c) improve riparian management to provide shade, reduce macrophyte growth, increased dissolved oxygen levels and decrease water temperature;
    d) carry out resource investigations to understand natural stream flow regimes and feasible options for remediation including;
        (i) managed aquifer recharge;
        (ii) flow enhancement from groundwater;
        (iii) streambed modification to reduce losses to groundwater in highly conductive reaches;
    e) enable and support water permit holders and landowners to collectively manage the maintenance of specified flows in the Paritua/Karewarewa Streams;
    f) provide for water to be diverted from the Ngaruroro for the enhancement of flows in the Paritua Stream.

METHODS OF IMPLEMENTATION

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

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 pursuant to s9(2) RMA and associated non-point source discharges pursuant to Section 15 (RMA)**	**Permitted**	a) The property is greater than 10ha b) The property or farming enterprise land area has less than 75% plantation forest cover. c), Either; 1. the owner or manager of the property or enterprise is either a member of a TANK Industry Programme or a member of a TANK Catchment Collective within the timeframes specified in Schedule 3 and accordance with the requirements of Schedule 5. Or; 2. The property or enterprise owner or manager of the property shall prepare a Farm Environment Plan in accordance with the requirements of Schedule 5 and within the timeframes specified in Schedule 3; The Farm Environment Plan is being implemented and; 1. the Council shall be provided with the Farm Environment Plan upon request 2. information about the implementation of the mitigation measures identified for the property shall be supplied to the Council on request **Stock Exclusion:** (d) The entry into or over the bed of any river lake or wetland by cattle, deer and pigs is a permitted activity provided that; (i) stock are at a stocking rate less than 18su/ha in the paddock adjacent to the river the stock have access to and (ii) The slope over 60% or more of the paddock is greater than 15 degrees. (d) Rivers that are crossed by formed stock races are bridged or culverted by 31 May 2023.	Draft conditions were considered by the JWG in relation to the use of production land that would have resulted in production land becoming discretionary in SPZs. Or that land use change in SPZs would become discretionary. The TANK Group sought that an alternative approach be developed where the Farm Plan or Collective contained additional requirements for land in SPZs, but that the land use activity remained permitted. Specific activities that might be carried out on production land that pose a risk to municipal water supplies are to be separately regulated (refer to where changes are made to existing RRMP rules). New provisions are included in the Schedule requirements for industry programmes, catchment collectives and farm plans where a production land activity is in an SPZ. The potential risk to other community water supplies is also required to be identified.

			(e) The entry into or over the bed of any river, lake or wetland by cattle, deer and pigs **not** permitted by condition (c) is a permitted activity until 31 May 2023. (f) Conditions (d) to (e) apply only to rivers with an active formed channel.	
TANK2 Production Land Use	**The use of production land on farm properties or farming enterprises in the TANK catchments pursuant to s9(2) RMA and associated non-point source discharges pursuant to Section 15 (RMA)**	**Controlled**	The activity does not meet condition (c) of Rule TANK1.	*1. The water quality limits and targets in Schedule 1 for the catchment where the activity is being undertaken and any measures required to reduce the actual or potential contaminant loss occurring from the property, taking into account their costs and likely effectiveness and including performance in relation to industry good practice and requirements for;* *a) Efficient use of nutrients and minimisation of nutrient losses,* *b) Wetland management* *c) Riparian management* *d) Management of farm wastes* *e) Management of stock including in relation to water ways and contaminant losses to ground and surface water* *f) Measures required to maintain or improve the physical and biological condition of soils so as to reduce risks of erosion, movement of soil into waterways, and damage to soil structure* *g) Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply* *2. Nature and scale of actual and potential contamination loss from the property in relation to the objectives specified in Schedule 1* *3. Timeframes for any alternative mitigation measures* *4. Duration of consent* *5. Lapsing of consent* *6. Review of consent conditions;* *7. The collection, recording, monitoring and provision of information concerning the exercising of the consent*

				Non Notification provision to be inserted with this rule
TANK 3 Stock Access	**Stock Access to rivers lakes and wetlands**	**Restricted Discretionary**	The activity does not meet any one of the conditions (d) – (f) of Rule TANK 1	*1. An assessment of sources, scale and significance of adverse effects of sediment, phosphorus, nitrogen and bacterial inputs to the waterbody that could be effectively or efficiently reduced by stock exclusion, bridging or culverting* *2. Alternative measures to meet water quality outcomes and improve ecosystem health, including by managing bank erosion or reducing sediment losses to water in contributing areas, altering land uses, or providing reticulated water for stock;* *3. Whether stock exclusion is practicable in the circumstances including in relation to;* *a) total costs of stock exclusion measures compared to expected water quality benefit as assessed in relation to matter 1 and other possible adverse effects including stock welfare* *b) technical or practical challenges of any works required for stock exclusion to be effective* *c) potential costs and benefits provided by alternative measures compared to stock exclusion* *4. Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply* *5. Timeframes for any alternative mitigation measures* *6. Duration of consent* *7. Lapsing of consent* *8. Review of consent conditions;* *9. The collection, recording, monitoring and provision of information concerning the exercising of the consent*

TANK 4 Production Land Use	**The changing of a use of production land on farm properties or farming enterprises 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)**	**Restricted Discretionary**	(a) Any change to a production land use[14]activity commencing after <date of notification> that results in an increase in annual nitrogen loss to more than 20 kg N/ha . (b) For any production land use activity that has an annual nitrogen loss of 20 kg N/ha, any change to this production land use activity commencing after <date of notification> that results in an increase in annual nitrogen loss of more than 6kg/ha/year. Note: The annual N loss is calculated on a whole of farm property or whole of farming enterprise basis. *For the purposes of interpretation of this rule, activities that are likely to exceed an annual loss of 20kgN/ha are described in Schedule 4.*	*1. Whether water quality limits and targets in Schedule 1 being met are being met in the catchment where the new activity is to be undertaken.* *2. The extent to which a TANK Industry Programme or Landowner Collective is undertaking measures to meet water quality objectives, including how the effect of the new land use activity on contributing to the objectives is being collectively addressed* *3. Any measures required to reduce the actual or potential contaminant loss occurring from the property, taking into account their costs and likely effectiveness and including performance in relation to industry good practice and requirements for;* *a) Efficient use of nutrients and minimisation of nutrient losses,* *b) Wetland management*	*Non-consensus item 2a* *Primary industry groups are concerned about the apparent lack of an effects basis for the use of a 20kg/ha threshold, while other stakeholders consider there is a risk that this N-loss is interpreted as a permitted threshold.* *There is also an observation that land use is to be regulated for nutrient loss, it needs to be considered in light of the industry good practice and area involved (and therefore account for the difference between different land use activities.)* *One suggestion is that the metric be considered in terms of a load according to a whole of property approach.* *This will be reported on further.*

[14] There are still some definitional issues and implementation challenges around what constitutes a 'change' and how baseline can be measured.

				c) *Riparian management* d) *Management of farm wastes* e) *Management of stock including in relation to water ways and contaminant losses to ground and surface water* f) *Measures required to maintain or improve the physical and biological condition of soils so as to reduce risks of erosion, movement of soil into waterways, and damage to soil structure* g) *Measures to prevent or minimise any adverse effects on the quality of the source water used for a Registered Drinking Water Supply* 4. *Timeframes for any alternative mitigation measures* 5. *Duration of consent* 6. *Lapsing of consent* 7. *Review of consent conditions* 8. *The collection, recording, monitoring and provision of*	

				information including Overseer or alternative model files, *Non Notification provision to be inserted with this rule*	
Amend existing rule 7	**Indigenous vegetation clearance**	**Permitted**	An RRMP amendment to Rule 7 to include an exception for land disturbance activities in the TANK catchments. f. In the TANK catchments, there is no clearance of indigenous vegetation within 10m of any rivers (ref maps/zones) except (i) where the activity is subject to a management plan prepared as part of the NESPF requirements (ii)where the clearance is part of improvements to riparian management for water quality/biodiversity purposes as specified in the relevant Farm Environment or Catchment Collective Plan (iii) where the clearance it is associated with construction of crossings		
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 20^0 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 where the land is flat to gently rolling ($0\text{-}7^0$) (ii) 10 m of any river, modified watercourse or drain where the land is moderately rolling ($>7 – 20^0$)		

			(iii) 15 m of any river, modified watercourse or drain where the land is over 20^0 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.	
			There is a proposal from the JWG that tree removal in an SPZ may require further oversight through a resource consent. This is subject to further work to understand the risks of this activity and the benefits of regulation to address the risk.	
Note for Rule 7: The conditions in rule 7 need not apply if the property is part of an industry programme or landowner collective and the activity is described in the relevant property (farm) plan along with a description of the measures that are adopted to mitigate the risk of sediment loss to water to a similar standard.				

Water – Take and Use

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 Section14(3)(b) of the RMA**	**Permitted**	a) Except as provided by condition (b), the take is not from any of the following rivers or their tributaries, or Water Management Zones; Maraekakaho Stream Ahuriri Water Management Zone Awanui Stream and its tributaries Lake Poukawa Water Management Zone Louisa Stream b) The take does not exceed 5 cubic metres per day per point of take per any one property except; (i) Takes existing as at <date of notification> which may continue to take up to 20 cubic metres per	

			property per day and existing takes to meet the existing needs of animals for drinking water. (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. c) The taking of water does not cause any stream or river flow to cease. d) Fish and eels shall be prevented from entering the reticulation system A Means of Compliance for Condition 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. e) The activity shall not cause changes to the flows or levels of water in any connected wetland. 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 .	
TANK 6 Groundwater takes….	**The take and use of groundwater in the TANK Water Management Zones including under**	**Permitted**	a) Except as provided by condition (b)(i), the take is not from the Lake Poukawa Water Management Zone. b) There is only one point of take per property and the take does not exceed 5 cubic metres per day except; (i) Permitted takes existing as at <date of notification> 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.	

	Section14(3)(b) of the RMA		(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. (iii) The taking of water for aquifer testing is not restricted c) The rate of take shall not exceed 10 l/s other than aquifer testing for which the rate of take is not restricted. 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. e) The take shall not cause changes to the flows or levels of water in any connected wetland. 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 in respect of application subject to section 124** (Heretaunga Plains Water Management Zone)	**Restricted Discretionary**	a) The taking and use of water from the **Heretaunga Plains Water Management Zone** does not comply with the conditions of rules TANK 6. b) The application is for the continuation of a water take and use authorised in a water permit that *was issued before <proposed plan date>* and that is due for renewal and section 124 applies. **Actual and Reasonable Re-allocation** c) The amount taken and used for irrigation is the **actual and reasonable** amount d) the amount taken and used for municipal, community and papakāinga water supply is:	The Council will impose conditions in respect of the following matters; 1. The extent to which the need for water has been demonstrated and is actual and reasonable. 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 3. The quantity, rate and timing of the take, including rates of take and any other requirements in relation to any minimum flow or level given in Schedule 4 and rates of take to limit drawdown effects on neighbouring bores. 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

			(i) the quantity specified on the permit being renewed; or (ii) any lesser rate applied for e) Other than as provided in (c) or (d) the amount taken and used is the least of: (iii) the quantity specified on the permit due for renewal or (iv) any lesser rate applied for (v) the maximum annual water use in any one year within the 10 years preceding 1 August 2017 (including as demonstrated by accurate water meter records) **Stream Flow Enhancement** f) The stream flow depletion (in l/sec) will be calculated using the Stream Depletion Calculator and when a stream flow enhancement scheme for the affected stream is in place a contribution to stream flow enhancement will be calculated according to the extent of total stream flow depletion and based on the allocated amount of water. g)The volume and rate of water able to be abstracted is reduced by an amount equivalent to the stream flow depletion calculated in (e) (as determined by the Stream Depletion Calculator) at any time the flows in the affected stream reduces below the minimum flows in schedule 4 h) Any take authorised under clause (c) is not subject to conditions (f) and (g) in respect of that part of the total allocated amount used for essential human health. **General Conditions** i) A water meter is installed	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 including notification requirements to the Registered Drinking Water supplier 5. For applications to take water for municipal, community and papakāinga water supply; a. provisions for demand reduction and asset management over time so that water use is at reasonable and justifiable levels including meeting an Infrastructure Leakage Index of 42 b. Rate and volumes of take limited to the projected demand for the urban area provided in the HPUDS 2017. c. water demand based on residential and non-residential use including for schools, rest homes, hospitals commercial and industrial demand within the planned reticulation areas 6. The effects of any water take and use for frost protection on the flows in connected surface water bodies. 7. 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% 8. 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.

			j) Back flow of water or contaminant entry into the bore shall be prevented	9. Management of bores including means of backflow prevention and ensuring well security. 10. Information to be supplied and monitoring requirements including timing and nature of water metering data reporting and the installation of telemetered recording and reporting 11. The duration of the consent (Section 123 of the Act) as provided for in Schedule 6 timing of reviews and purposes of reviews (Section 128 of the Act). 12. Lapsing of the consent (Section 125(1)). 13. Contribution to services or works for the enhancement of river flows associated with groundwater abstraction and stream depletion in the HPWMZ) be provided in respect of the performance of conditions and administration charges (Section 108 of the Act). *Note: the amount to be contributed to the stream flow enhancement as required by conditions (f) and (g) will be determined by council in consultation with water permit holders and will be included in the schedule of fees and charges and reviewed annually.* *There is still some analysis required to ensure this approach is both robust and legal.*
TANK 8 Surface and groundwater water takes (abstraction at low flows)	**Application to continue to take water in respect of permits subject to section 124**	**Restricted Discretionary**	a) The take is not from the HPFQMU b) The taking and use of water from surface or groundwater water bodies does not comply with conditions of TANK 5, TANK 6. c) 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 except; (i) where the consent being renewed includes any condition restricting takes at flows that are higher than the applicable flow specified in Schedule 4	The Council will restrict its discretion to the following matters; 1. The extent to which the need for water has been demonstrated and is actual and reasonable. 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 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 4

			Actual and Reasonable Re-allocation d) The amount taken and used for irrigation is the actual and reasonable amount e) The amount taken and used for municipal, community and papakāinga water supply is: (i) the quantity specified on the permit being renewed; or (ii) any lesser rate applied for f) Other than as provided in (c) or (d) the amount taken and used is the least of: (i) the quantity specified on the permit due for renewal or (ii) any lesser rate applied for (iii) the maximum annual water use in any one year within the 10 years preceding <date of notification> (including as demonstrated by accurate water meter records) **Surface Water Management Zones** g) Any take from groundwater in Zone 1 authorised as at <date of notification> in any surface Water Management Zones is subject to either; (i) a restriction in water flow when the applicable minimum flow is reached in the relevant zone (as shown in schedule ??) Or (ii) the take complies with conditions (e) and (f) of rule TANK 7 **General Conditions** h) A water meter is installed	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 including notification requirements to the Registered Drinking Water supplier 5. For applications to take water for municipal, community and papakāinga water supply; a. provisions for demand reduction and asset management over time so that water use is at reasonable and justifiable levels including meeting an Infrastructure Leakage Index of 4 b. Rate and volumes of take limited to the projected demand for the urban area provided in the HPUDS 2017. c. water demand based on residential and non-residential use including for schools, rest homes, hospitals commercial and industrial demand within the planned reticulation areas 6. The location of the point(s) of take 7. The effects of any water take and use for frost fighting on the natural flow regime of the river. 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. 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% 10. Measures to achieve efficient water use or water conservation and avoid adverse water quality

			i) Fish and eels are prevented from entering the reticulation system A Means of Compliance for Condition i) Installation of a screen or screens on the river intake that has a screen mesh size not greater than 3 millimetres and is constructed so that the intake velocity at the screen's outer surface is less than 0.3 metres per second and is maintained in good working order at all times. j) Back flow of water or contaminants into any bore shall be prevented	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. 11. Management of bores and other water take infrastructure including means of backflow prevention. 12. The duration of the consent (Section 123 of the Act) as provided for in Schedule timing of reviews and purposes of reviews (Section 128 of the Act). 13. Lapsing of the consent (Section 125(1)). 14. For takes from Zone 1 in the Ngaruroro and Tutaekuri Management Zones Contribution to services or works for the enhancement of river flows associated with groundwater abstraction and stream depletion in relation to takes subject to condition (e)) provided in respect of the performance of conditions and administration charges (Section 108 of the Act). *Note: the amount to be contributed to the streamflow enhancement as required by conditions (e)(iv) and (j) will be determined by council in consultation with water permit holders and will be included in the schedule of fees and charges and reviewed annually.*
TANK 9 Groundwater and Surface water takes (low Flow)	**The take and use of surface (low flow allocations) or groundwater**	**Discretionary**	a) The take and use does not comply with the conditions of TANK 7 and TANK 8 b) The total amount taken, either by itself or in combination with other authorised takes in the same water management zone does not exceed the total allocation limit in the relevant zone as specified in Schedule 4 except (i) where the application is for the continuation of a water take and use authorised in a water permit that was issued before <proposed plan date> and that is due for renewal and section 124 applies and where the consent being renewed includes	

			any condition restricting takes at flows that are higher than the applicable flow specified in Schedule 4		
TANK 10 Taking water	**The take and use of surface or groundwater**	**Prohibited/Non-complying**	a) the activity does not comply with the condition b) of TANK 9	*Non-consensus item 3b* *This rule was originally specified as prohibited and was not a consensus decision.* *No application can be made for a prohibited activity. There are provisions for applicants to provide better technical information about their location in Zone 1. A prohibited activity would prevent changes.* *Transfers from surface to ground water takes are also contemplated if a net benefit can be shown. This would be prevented by a prohibited rule.* *Non-complying is being recommended.*	
TANK 11 Taking water – high flows	**The taking of surface water at times of high flow for storage and the discharge of water into a storage impoundment**	**Discretionary**	a) The take to storage on its own or in combination with other takes in the same water management zone does not cause the allocation limit for high flow allocations specified in Schedule 7 to be exceeded b) The take to storage does not breach the applicable minimum flow as shown for the relevant zone in Schedule 7 c) Except as provided in Schedule 7 the take to storage either on its own or in combination with other takes to storage or damming in the same water management zone does not cause the flow regime of the river to be altered by more than 6.3% of the FRE_3 for that river.	**Notes;** 1. The construction of dams greater than 4 metres in height and holding more than 20,000 m3 will also need a Building Consent. Dams smaller than this are exempt from the Building Act provisions. For rules relating to the construction and maintenance of dams, refer to section 28.2 (Dams and Weirs) in Part IV (Rivers and Lakes).	Non-consensus Item 7c The TANK Group was unable to agree on an appropriate limit to the amount of water that should be made available for abstraction. The use of the Fre_3 statistic as a useful attribute to manage the degree of hydrological impact was agreed, just not the specific allocation limit suggested by the 10% change.
TANK 12 Damming	**Damming of surface waters and discharge from dams**	**Discretionary**	Except as prohibited by Rule TANK 14, and in schedule 5 the **damming** and discharge from the dam either on its own or in combination with other takes to storage or damming in the same water management zone does not cause the flow regime of the river to be altered by more than 7% of the FRE_3 for that river		

TANK 13 Take and use from storage	**Take and use from a dam or water impoundment**	**Discretionary**	The taking and use of water from a dam or water impoundment that does not comply with TANK 5	
TANK 14 Damming	**Construction of Dams or the damming of water**	**Prohibited**	On the mainstem of the following rivers a) Ngaruroro River and its tributaries: (i) Taruarau River (ii) Omahaki River b) Tutaekuri River and its tributaries : (i) Mangaone River (ii) Mangatutu River No application may be made.	

Discharge Activities

RULE	ACTIVITY	STATUS	CONDITIONS/STANDARDS/TERMS	MATTERS
Rule	**Activity**	**Classification**	**Conditions/standards/terms**	**Matters for control/discretion**
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 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	
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°Celcius 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 <ten years after date of notification> in the TANK FQMUs 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	
RRMP Rule 33 Drainage water	**Discharge of Drainage water**	**Controlled**	Insert at the end of condition (f); Except in the TANK FQMUs (g) After <ten years after date of notification> in the TANK FQMUs 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	For activities carried out in the TANK FQMUs , add additional Matter of Control: h. Measures or methods required for meeting the receiving water quality standards. i. Monitoring for water quality
RRMP Rule 1 Bore drilling	**The drilling, construction and alteration of bores**	**Controlled**	Insert after a); b) The bore is not located within a Source Protection Zone	
RRMP Rule 2 Bore drilling		**Restricted discretionary**		Insert after e); f) The actual or potential effects of the bore and bore drilling on the quality of source water for Registered Drinking Water Supplies and any measures to reduce the risk to the water quality including notification requirements to the Registered Drinking Water supplier, the maintenance of the bore and the well head, including decommissioning the bore where necessary.
RRMP Rule 2 Decommissioning bores		**Permitted**	Insert after e) Where the bore is in a Source Protection Zone, information to confirm compliance with conditions (a) to (e) shall be provided to the Council *within one week of the activity first commencing or upon request*??	
RRMP Rule 5		**Permitted**	Insert after (d)	

Feedlots and feedpads			e) The feedpad or feedlot is not located in a Source Protection Zone	
RRMP Rule 6 Feedlots and feedpads		**Restricted discretionary**		Insert after e) The actual or potential effects of the feedlot or feedpad 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.
RRMP Rule 12 Stock feed		**Permitted**	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 within one week of the activity first commencing or upon request??	
RRMP Rule 13 Use of compost, biosolids and other soil conditioners		**Permitted**	Insert after i) j) Where the activity is in a Source Protection Zone and involves more than kg or m^3 of material on any one property, information to confirm compliance with conditions (a) to (i) shall be provided to the Council within one week of the activity first commencing or upon request??	
RRMP Rule 14 Animal Effluent		**Controlled**	Insert after g) h) The activity is not in a source Protection Zone	
RRMP Rule 15 Discharge of animal effluent in sensitive catchments	**Insert at the end of the list** **Or in any Source Protection Zones**	**Discretionary**		
RRMP Rule 16 Management of solid waste on production land		**Permitted**	Inset after k) l) The activity is not located in a Source Protection Zone	
RRMP Rule 37		**Permitted**	Inset after r)	

New Sewerage systems			s) The activity is not located in a Source Protection Zone	
RRMP Rule 40 Discharges from Closed landfills		**Controlled**		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.
RRMP Rule 48 Discharges of solid contaminants including cleanfill to land			Inset after h) i) The activity is not located in a Source Protection Zone	
RRMP Rule 49 Discharges to land that may enter water		**Permitted**	Inset after l) m) The activity is not located in a Source Protection Zone	
RRMP Rule 61 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**	**Controlled**	Insert after d) e) The transfer is not in any TANK Freshwater Quantity Management Unit.	
RRMP Rule 62 Transfer of Permits to take and use groundwater	**The transfer of a permit to take and use groundwater to another site**	**Controlled**	Insert after d) e) The transfer is not in any TANK Freshwater Quantity Management Unit.	
Inset new RRMP Rule 62a Transfer of Permits to take and use water	**The transfer of a permit to take and use water to another site**	**Restricted Discretionary**	a) The transfer is in a TANK Freshwater Quality Management Unit	The Council will restrict its discretion to the following matters; 1. Whether the transfers in within the same water management unit and any technical information that provides better understanding or definition of management unit boundaries. Need to complete this list….

RMMP Rule 71 Activities Affecting river control and drainage scheme	**Insert at the end of the first bullet point: Except for riparian vegetation established to provide shade in the Karamu catchments**	**Discretionary**		The exception needs to be supported by a permitted activity that ensures any riparian planting in these areas is subject to performance standards (and somehow according to a planting guide (that the HBRC is yet to prepare))

STORMWATER

RULE	ACTIVITY	CLASSIFICATION	CONDITIONS/STANDARDS/TERMS	MATTERS FOR CONTROL/DISCRETION
STORMWATER 1	The diversion and discharge of stormwater into water, or onto land from any new and existing small-scale[15] and residential activities where the stormwater or drainage water may enter water	**Permitted**	The diversion and discharge; (a) shall not cause scouring or erosion of land or any water course at or beyond that point of discharge (b) shall not cause or contribute to flooding of any property (c) contains no hazardous substances (d) shall not cause or contribute to any of the following to occur: I) production of oil or grease films, scums or foams, or floatable or suspended materials Ii) any emission of objectionable odour Iii) Any conspicuous change in colour or the visual clarity Iv) any freshwater becoming unsuitable for consumption by farm animals v) the destruction or degradation of any habitat, mahinga kai, plant or animal in any water body or coastal water vi) the discharge of microbiological contaminants (e) There is no stormwater network at the property boundary	

[15] The definition and detail around small-scale and residential activities is still to be confirmed

			(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. (g) The person who discharges or diverts, or who causes the discharge or diversion to be undertaken, must provide such information upon request by the Council to show how the conditions (a) [Erosion], (b) [Flooding], (c) [Hazardous Substances], (d) [Water Quality] will be met or have been met.	
STORMWATER 2	Diversion and discharge of Stormwater from an existing or new TLA managed stormwater network into water, or onto land where it may enter water	**Controlled**	The diversion and Discharge: 1. Shall submit for the Approval of Council an Integrated Catchment Management plan that contains the following measures to demonstrate how the network manager will meet objectives for water quality that may be adversely affected by stormwater discharges; (i) Monitoring to assess existing water quality and level of impact on receiving water quality standards (ii) Identification of the spatial extent of the stormwater network to which the consent relates to (iii) Identification of the priority streams or catchments where stormwater discharges are resulting in receiving water quality below the standards specified in policy X (iv) Identification of any industrial or trade sites, that use, store or produce the discharge of contaminants of concern (as defined in Table 3.1[16] of Hawke's Bay Waterway Guidelines Industrial Stormwater Design), (v) A programme of mitigation measures including timeframes and milestones for the enhancement of streams identified in (iii),	1) The adequacy of the Integrated Catchment Management Plan including, but not limited to: - Satisfactory implementation of the Integrated Catchment Management Plan - The adequacy of the Monitoring regime - The use of low impact stormwater design methods 2) Management of adverse effects, including cumulative effects, on aquatic ecosystem health and mahinga kai, contact recreation and Māori customary use

[16] This table will be updated and refreshed to be fit for purpose: refer to detailed comments below : contractor likely to do this work. Just finalising detail around engagement at the moment.

			(vi)	Identification of sites within those catchments that have a high risk of contaminants entering the stormwater network or land where it might enter groundwater, including industrial and trade premises and areas subject to new urban development.	
			(vii)	A programme to ensure Urban Environment Site Management Plans for sites identified as in (vi) above, that ensure stormwater quality risks are managed.	
			(viii)	Identification of areas at risk of flooding and where levels of service to protect communities from flooding are not being met, to provide information about how this will be managed.	
			(ix)	The potential effects of climate change on infrastructure capacity and any planned mitigation measures including the identification of secondary flow paths and the capacity of the receiving environment.	
			(x)	Identification of measures to demonstrate how discharges shall not cause scouring or erosion of land or any water course beyond the point of discharge	
			(xi)	Where the stormwater network (or part thereof) or discharge locations are located within a Source Protection Zone of a registered drinking water supply as defined in Schedule xx, measures to prevent or minimise adverse effects on the quality of the source water for the registered drinking water supply or increasing the risk to unsafe drinking water being provided to persons and communities supplied by the drinking water supply	
			(xii)	Identification of measures to demonstrate the discharge shall not contain hazardous substances[17] or contaminants (including wastewater) and shall not	

[17] As defined in the Hazardous Substances and New Organisms Act 1996

			cause any of the following to occur after reasonable mixing[18]: i) production of oil or grease films, scums or foams, or floatable or suspended materials ii) any emission of objectionable odour iii) Any conspicuous change in colour or visual clarity iv) Any freshwater becoming unsuitable for consumption by farm animals v) the destruction or degradation of any habitat, mahinga kai, plant or animal in any water body or coastal water.	
STORMWATER 3	Discharge of stormwater into land or water from industry or trade premises that is not located over a Source Protection Zone[19] where low risk contaminants of concern (as defined in Table 3.1 of the Hawke's Bay Waterway Guidelines Industrial Stormwater Design) are stored or used	**Controlled**	The diversion and discharge; (a) shall not cause scouring or erosion of land or any water course beyond that point of discharge (b) shall not cause or contribute to flooding of any property, (c) shall not result in surface ponding persisting for longer than 6 hours after the cessation of rainfall (c) shall not contain hazardous substances[20] (d) The diversion and discharge shall not cause after reasonable mixing[21] : i) production of oil or grease films, scums or foams, or floatable or suspended materials ii) any emission of objectionable odour iii) Any conspicuous change in colour or the visual clarity iv) result in any freshwater becoming unsuitable for consumption by farm animals	NEED MATTERS FOR CONTROL (i) The actual or potential effects of the discharge on the quality of source water for Registered Drinking Water Supplies and any measures to reduce the risk to the water quality

[18] As defined at definition 9.7 in the Glossary of the Hawke's Bay Regional Resource Plan
[19] Source Protection Zone is defined as both the Scheduled zones to the Plan, and the default zones.
[20] As defined in the Hazardous Substances and New Organisms Act 1996
[21] As defined in definition 9.7 in the Glossary of the Hawke's Bay Regional Resource Plan

			v) the destruction or degradation of any habitat, mahinga kai, plant or animal in any water body or coastal water e) There is no reticulated stormwater network at the property boundary (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.	
STORMWATER 4	Discharge of stormwater into land or water from industry or trade premises where: a) low risk contaminants of concern located in a Source Protection Zone are used or stored; or medium or high risk contaminants of concern are stored or used	**Restricted discretionary**	(a) The diversion and discharge; (i) shall not cause scouring or erosion of land or any water course beyond that point of discharge (ii) shall not cause or contribute to flooding of any property, (iii) shall not result in surface ponding persisting for longer than 6 hours after the cessation of rainfall (iv) shall not contain hazardous substances (v) shall not be discharged to land if the industry of trade premises is located in a Source Protection Zone (b) The diversion and discharge shall not cause any of the following to occur after reasonable mixing[22]: i) production of oil or grease films, scums or foams, or floatable or suspended materials Ii) any emission of objectionable odour Iii) Any conspicuous change in colour or the visual clarity Iv) result in any freshwater becoming unsuitable for consumption by farm animals v) the destruction or degradation of any habitat, mahinga kai, plan or animal in any water body or coastal water vi) the discharge of microbiological contaminants.	1. The preparation of an Urban Environmental Site Management Plan (Schedule xx) including measures adopted to minimise the risk of contaminants of concern entering stormwater including: (i) Installation of stormwater management devices including as detailed in table 3.1 of the Hawke's Bay Regional Council Industrial Stormwater Waterway Design Guidelines. (ii) Alignment with relevant industry guidelines and best practice standards. g) Water quality standards in relation to any contaminants being used on site and specific methods for treating these. h) Where the discharge or any land contributing to the discharge is in a Source Protection Area, the actual or potential effects of the discharge on the quality of source water for registered drinking water supplies and any measures to reduce the risk to the water quality

[22] As defined in definition 9.7 of the Glossary of the Hawke's Bay Regional Resource Plan

			e) There is no reticulated stormwater network at the property boundary (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. g) Where the activity is located within a Source Protection Zone for a registered drinking water supply the effect of the proposed activity, and the appropriateness of mitigation measures, on the quality of source water within the Secure Protection Zone and its suitability for drinking water use without treatment, including the potential on to increase the risk of unsafe drinking water being provided to persons and communities supplied by the registered drinking water supply.	
STORMWATER 5	Possible rule for new TLA connections..	**Restricted discretionary**	Still to be assessed.	

[1] Issues around capacity and TLA bylaws need to be resolved – condition means the discharge to water/land is not permitted if a reticulation option is available

[2] Needs further work - Likely connection with new work arising out of drinking water group findings

Schedule 1 and Schedule 2 will be the water quality limits and targets (schedule 1 is at page 10 and schedule 2 is in preparation and subject to further advice from the Treaty Partners Group.)

Schedule 3: Priority Catchments

This schedule sets out the list of priority catchments where

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

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

	High priority	**Medium priority**	**Low priority**	**Long term**
Sediment yield (SedNet)[23]	>500 t/km^2/year	350 - 500 t/km^2/year	250 - 350 t/km^2/year	<250 t/km^2/year
TN concentrations (all flows, median)	> 2 mg/L	> 1.2 mg/L	> 1 mg/L	<1 mg/L
TN yield (modelled) (all flows, average per sub-catchment)	> 10kg/ha/yr	> 3.5 kg/ha/yr	> 1.2 kg/ha/yr	≤1.2 kg/ha/yr
Dissolved Oxygen levels Class A streams (and /or where stream gradient <2m/km	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%
* FENZ classification for low gradient, predominantly soft sediment streams, see table 'Ecological units'				

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).

[23] Note that the sediment loss rates of greater than 1000t/km^2/y are common in other parts of the district including the Wairoa catchment and parts of southern Hawkes Bay and this rate is a better indicator of priority across the region. The risk of sediment loss across all of the bay is likely to influence how council allocates its resources equitably. However, in the TANK catchments, sediment accumulation is a concern for both the estuaries and the priority threshold is higher as a result. Risk of sediment loss varies considerably across the TANK sub-catchments, with some individual properties at higher risk than others. This level of risk is not able to be shown at the catchment scale of mapping.

Schedule 4 –LAND USE CHANGE

If a land use activity is or adopts the following activities or management methods, information will be requested from the landowner or land manager to demonstrate or model the annual Nitrogen loss in order to;

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

Activities likely to have an Annual N loss of greater than 20kg/ha[24]:

[24] the need for this schedule and its content is still subject to further input – see nonconsensus item 2

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
- 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 [25]programmes, and will in addition need to address local water quality and quantity issues.

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

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

[25] This refers to existing industry programmes such as Hort NZ GAP, Sustainable Winegrowing, Fonterra Clean Stream etc.

aspects are not subject to the Council's approval, but may be a means of enabling integrated land and water management for a wider range of management objectives.

Farm Environment Plan

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

SECTION A; Industry Groups and Catchment Collectives

Programme Requirements

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

1. Minimum requirements for establishment

a) A catchment collective must incorporate more than 50% of the land area in the target catchment.

b) any requirement for coverage or membership of industry programmes?

2. Governance and Management

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

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

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

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

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

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

Information and management systems and processes to ensure;

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

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

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

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

A description of the Programme area including

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

Section B

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

3. Environmental Outcomes

a) With reference to specified water quality outcomes in Schedule 1 of this Plan relevant to the location of Members' properties and activities being undertaken, a statement of the measures or practices needed in relation to minimising and mitigating the cumulative environmental effects of land use that will enable the specified water quality objectives to be met including where appropriate for;
  (i) managing contaminant losses (especially sediment, nutrients and bacteria) to waterways including efficient use of nutrients and, where water quality is degraded, reductions in losses that contribute to meeting the specified water quality objectives in Schedule 1
  (ii) managing riparian margins, including to meet the outcomes specified in Policy 9maintaining or improving the physical and biological condition of soils (Policy 18) in order to avoid, remedy or mitigate problems arising from:
    a) Loss of topsoil by wind or water erosion
    b) Movement of soils and contaminants into waterways
    c) Damage to soil structure and health
    d) Mass movements of soil
  (iii) wetland management including to meet the outcomes specified in Policy 94
  (iv) Management of animal effluent to avoid contamination of ground and surface waters

(v) Measures required to reduce risk of contamination of the source water for any Registered Drinking Water Supply[26].

(vi) Management of stock, including in relation to river or stream crossings and exclusion from waterways in a manner that is consistent with Policy 16b)

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

4. Timeframes

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

5. Information Requirements

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

(i) Any information or assessments about the nature and significance of any land use change in accordance with Policy 10 and based on land uses <at the date of plan notification>

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

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

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

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

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

a) LUC (Land Use Capability)

b) Olsen P

c) Stocking rates and densities of different classes of stock

[26] 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.

d) Application of fertilisers
e) Application of collected animal effluent
f) Cultivation, soil disturbance or vegetation clearance activities

(iii) A Catchment Collective member may adopt or integrate a plan or documentation developed as part of an Industry Good Agricultural Practice[27] programme, provided that the Plan or documentation is consistent with the requirements of the Catchment Collective Programme.

6. Nutrient Management

a) In any catchment or programme area where water quality objectives for nitrogen concentrations as detailed in Table 1 (or as further detailed for local rivers) are not being met;
   (i) an inventory of the nitrogen loss rate (kg/ha/year) for properties likely to exceed a nitrogen loss rate of 20kg/ha/year, as determined by application of Overseer (or an alternative nutrient budget model approved by the Hawke's Bay Regional Council) by a suitably qualified independent practitioner.
   (ii) a description of any mitigation measures identified as necessary to meet water quality objectives on those properties or within the relevant catchment.
   (iii) annual recording and reporting of nutrient input and export data, including annual nitrogen loss rates.

7. Approval

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

8. Reporting

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

[27] This refers to existing industry programmes such as Hort NZ GAP, Sustainable Winegrowing, Fonterra Clean Stream etc.

(vi) Any *significant* land use changes [28] shall be described as necessary to identify any changes in contaminant loss risks and this shall be shown in amendments to the Plan

(vii) Issues or matters that require input or direction from the Council, including the management of activities outside the Catchment Collective which may be adversely affecting the achievement of the **Catchment Collective Programme**

9. Programme Review

b) Each Catchment Collective or Industry Group will review its Programme no less than every 5 years and report to the HBRC on the findings of the review including:

(i) progress towards meeting freshwater management objectives

(ii) rate of implementation of identified works to reduce contaminant losses, including sediment and nutrients.

(iii) adoption of any new mitigation or good practice measures identified by industry,

(iv) identification of opportunities for improvements to the programme including where necessary amending performance standards, and in relation to nutrient management in clause 6

(v) any issues arising with meeting objectives or milestone

10. Auditing

a) The HBRC will;

(i) Publicly report on the implementation of TANK Programmes

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

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

Section C

This section sets out the requirements for Farm Environment Plans.

1. A Farm Environment Plan must;

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

b) contain the following information;

(i) physical address

(ii) details about ownership and property managers including contact details for the person responsible for the implementation of the Plan

c) be accompanied by maps or aerial photograph at a scale to clearly show

[28] Significant can be interpreted to mean more than 10% of the programme area

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

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

2. Reporting and Review

a) the council shall be advised when the Farm Environment Plan has been prepared and provided with details about the mitigation measures and timeframes for their completion
b) Information about the implementation of identified mitigation measures or good management practices shall be provided to Council upon request
c) Any amendments to the programmed mitigation measures plus any changes made to them and reasons for them (including any adverse events such as severe weather, earthquakes etc) shall be provided to the Council on request
d) Any *significant* land use changes [29] shall be described as necessary to identify any changes in contaminant loss risks and this shall be shown in amendments to the Plan
e) The Plan must be reviewed no less than every 5 years and information about the review findings provided to the Council upon request

3. Auditing

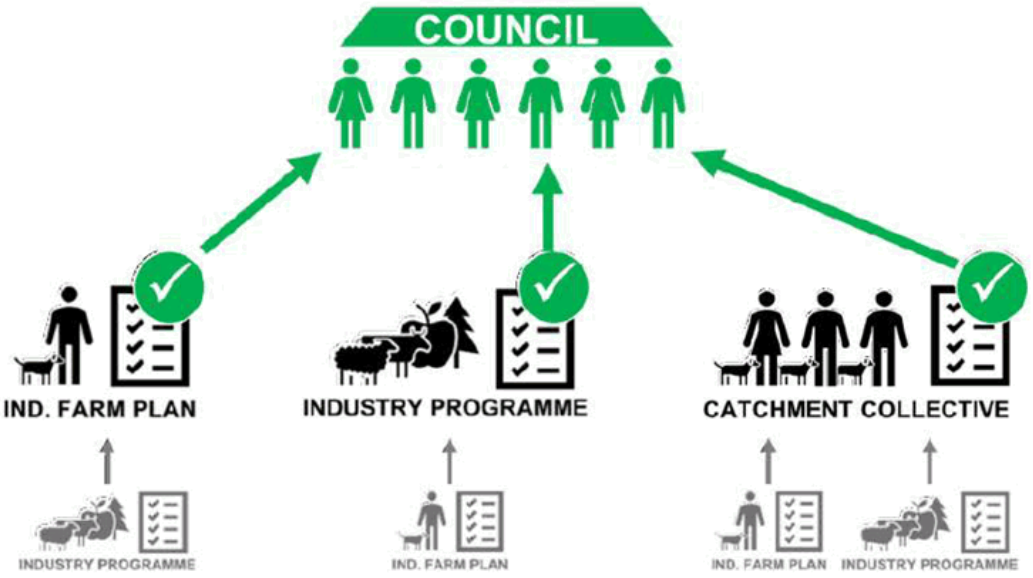
b) The HBRC will;
(i) Publicly report on the implementation of TANK Farm Environment Plan requirements

(ii) Undertake random annual audits of properties in relation the Farm Environment Plan implementation of programmed works, adoption of identified good management practices, including nutrient management budgets where required.

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

[29] Significant can be interpreted to mean more than 10% of the programme area

Note: the diagram below shows how the three environmental management approaches provided for in TANK 1 and Schedule 1 inter-relate with each other and their relationship with Council regulations. (The diagram is not part of the Plan Change but is included here for assistance in interpretation.)



[30]

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

[30] 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

Schedule 6; Flows, Levels and Allocation Limits

Minimum and Trigger Flows and Allocation Limits

Management units includes any tributaries of the named river)	Water bodies	Minimum flow/flow enhancement site	Minimum Flow (litres/second)	Flow enhancement Trigger	Allocation limit (litres/second for surface water and M^3/week for groundwater	Allocated amount (l/sec)[31]
Ahuriri	All surface water	n/a	n/a	n/a	Existing use[32] only	
	All groundwater	n/a	n/a	n/a	Existing use only[33]	
Lake Poukawa Water Management Zone	Groundwater	n/a	20	n/a	Existing use only[34]	
	Surface water	at Douglas Rd	20		Existing use only[35]	6
Karamu Surface Water Management Zone	Awanui	The Flume	120	120	Total not to exceed 30	41
	Kawerawera/ Paritua	Turamoe Rd		75		
	Ongaru	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	70
Ngaruroro Water Management Zone s/w and g/w	Maraekakaho River	Taits Rd	109	n/a	36	30
	Tutaekuri-Waimate	Goods Bridge	1200	n/a	607	554
	Ngaruroro River (surface and Zone 1)	Fernhill	2400(tbc)	Subject to policy 29[36]	1581(tbc)	3033 (incl zone 1)
	Ngaruroro Groundwater	N/a		n/a	Existing use only[37]	
Tutaekuri Water Management Zone s/w and g/w	Mangatutu Stream	Puketapu	3800		120	161
	Mangaone River	Puketapu?	tbc		140	109
	Tūtaekurī (surface plus Zone1)	Puketapu	tbc		1536 tbc	1141
	Tūtaekurī groundwater	n/a	n/a		Existing use only[38]	
Heretaunga Plains Water Management Zone	Heretaunga Plains groundwater	n/a	n/a		(Interim limit 90Mm^3per year) Existing use only	

[31] average rate derived from allocated weekly volumes70
[32] Surface water any authorised existing at <date of notification> also subject to actual and reasonable assessments. (Does not apply to existing permitted takes which can continue. New permitted takes also restricted)
[33] Precautionary approach being taken for unknown groundwater resources. Limit constrains use to existing levels existing at <date of notification> until more information is available about nature and extent of the groundwater including recharge information and connections with other water bodies.
[34] Groundwater; any authorised existing at <date of notification>, also subject to actual and reasonable assessments (Does not apply to existing permitted takes which can continue. New permitted takes also restricted)
[35] as above for groundwater
[36] The water storage and release scheme requires further investigation before this flow can be determined
[37] as above for groundwater
[38] as above for groundwater

Schedule 7: HIGH FLOW ALLOCATION

Table; High Flow Allocation Limits and Triggers

RIVER NAME	FLOW MANAGEMENT SITE	FLOW TRIGGER	HIGH FLOW ALLOCATION	LIMITS FOR DAMMING	
1. Ngaruroro R	Fernhill	20 m^3/sec	8 m^3/sec* (includes the current 2 m^3/sec allocation)	n/a	Non-consensus item 7 *The level of change to the Fre_3 statistic is recognised as a measure for protecting natural river flushing functions. 10% change is widely recognised as not significantly adversely affecting the river hydrology. The TANK Group could not agree on the appropriate limit relative to this threshold.*
2. Ngaruroro R	Fernhill	Trigger flows above 5000 l/sec	Abstraction of up to 1 m^3/sec authorised in consents existing as at <date of notification> Included in the 1m^3/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[39]	200 l/sec which is solely available to be discharged into the Paritua Stream to provide for stream enhancement		
Ngaruroro and Tutaekuri Tributaries		Median flow	Proportionally in comparison to flow contributions to the main stem	No change of more than 10% to FRE_3	
Tutaekuri	Puketapu	Median flow	No change of more than 10% to FRE_3	n/a	

[39] this trigger flow may yet be amended

Schedule 8: SITE Management Plan, Stormwater Management

Refer to Rule 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.

Glossary of terms used;

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

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

and the least of either

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

c) the quantity required to meet the modelled crop water demand for the irrigated area with an efficiency of application of no less than 80% as specified by the IRRICALC water demand model (if it is available for the crop and otherwise with an equivalent method), and to a 95% reliability of supply where the irrigated area is;
    a. no more than in the permit due for renewal, or any lesser amount applied for and
    b. where evidence is supplied to demonstrate that the area has, and can continue to be, irrigated and the permit substantially given effect to.

The quantities assessed or calculated by clauses (b) and (c) may be amended after taking account of;

    c. the completeness of the water permit and water meter data record;
    d. 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;
    e. effects of water sharing arrangements
    f. crop rotation/development phases

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

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

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

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

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

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

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

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

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

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

Forestry Management Plan means

Fre^3 means…. according to the Regional Council records

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.

Ki uta ki tai – means

Registered Drinking Water Supply (or Supplies) means ….

Registered Drinking Water Supplier means

Reticulated Stormwater Network

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

Source Protection Zone means ……..and is shown on the planning maps in schedule ?

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

Technical Method in respect of defining a Source Protection Zone means

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TANK – DRAFT IMPLEMENTATION PLAN

Editor: Ceri Edmonds

Date: 20 July 2018

Draft Version	Sent to	Issued	Comments incorporated
			Xan Harding
V3.0	TANK Members	12 June 2018	Mark Clews
			Bruce McKay
			Nathan Burkepile
			HBRC Staff
			TANK Group members at TANK meeting 41 (27 June 2018)
			Treaty Partner Working Group
V4.0	TANK Members	20 July 2018	

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Action 1: CATCHMENT COLLECTIVES & INDUSTRY PROGRAMMES

	Policy Obj	TASK DESCRIPTION	LEAD AGENCIES	PARTNERS	MEASURED BY	TIMEFRAME
1		Establish sub-catchment boundaries for land owner collectives, and identify properties and contact details for collectives Identify where farm plans and catchment plans are to be prepared	Industry Groups Farmer Reference groups Federated Farmers	HBRC – Land Management, IT, Land Science, Environmental Science Beef and Lamb Dairy NZ/Fonterra Ravensdown Hort NZ Mana whenua[1] Fish and Game NZ Winegrowers	Development of sub-catchment maps Identify where farm plans applicable	12 months from notification of the Plan
2		Templates for operating and managing the catchment collectives to be developed	HBRC – Policy and Land Management	Farmer reference groups Industry Groups Service providers Mana Whenua	Templates available	Six month from notification of the plan
3		Catchment collective plans developed and approved	Catchment collectives HBRC – Catchment Management	Industry Groups Independent Facilitators/Assessors	Plans for priority catchments approved	Industry/collective programme or farm plan in priority 1 catchment by 2023 Priority 2 by 2026 Priority 3 by 2029
4		Assess industry programmes in relation to plan objectives, and Schedule 3 requirements, identify where gaps exist and develop additional programme requirements where necessary.	Industry Groups; • Hort NZ GAP, • SWGNZ • Fonterra Sustainable Dairying etc. • Any existing pastoral initiatives e.g. Atkins Ranch	HBRC – Policy, Catchment Management	Comprehensive industry programme	End of 2019
5		Identify properties already subject to industry programmes	Industry groups	HBRC – Catchment Management	Properties subject to industry programmes identified	End of 2019

[1] Mana whenua – needs further consideration as to who (individual or groups of people) are relevant to each item e.g. TToH, hapū, wider tangata whenua etc.

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6		Catchment collective and Industry Group reporting and recording of information, including: • Information management systems in place (GIS), held by Council, with multi-party access provided • Monitoring programmes	HBRC – Team Leader, Data; FEMP Project Coordinator HBRC Science	NCC, HDC Catchment collectives Service providers Industry Groups	Information management system to be developed by HBRC by end 2019. Information being recorded	End 2019 Priority 1 catchment by 2023 Priority 2 by 2026 Priority 3 by 2029
7		Annual meetings with the Implementation Partners to provide regular progress reports about implementation actions, any relevant SOE information, and reporting on any implementation issues arising and alternative solutions, including adoption of continuous improvements as they arise.	HBRC – Implementation Team, Policy, Science, Catchment Management	Signatories to this Plan	Annual meetings of implementation partners	Annually
8		Continue to hold and develop a list of 'Approved Providers' for nutrient budgets and FEPs include information about service providers capable of delivering but not limited to: • Independent Facilitation • Catchment plan development • Information recording and reporting • Auditing	HBRC – Catchment Management, FEMP Project Coordinator, Principal Advisor Policy Implementation	Industry Groups	List produced and updated annually	Within 18 months of notification of the Plan Change

Item 4

Attachment 2

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Action 2: REDUCE SEDIMENTATION & MANAGE EROSION RISK

	Policy Obj	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
9		Council to prepare farm scale information about sediment loss risk to assist in making decisions about mitigation measures using tools such as SedNet, LUC, and LUCI. Note: Identification of high erosion risk is identified within the Priority Catchments within Schedule 3	HBRC – Land Science	HBRC – Data Beef and Lamb Dairy NZ/Fonterra Ravensdown Hort NZ groups	All catchment collectives and industry programmes have GIS based information/maps to identify risk/priority areas/LUC info etc.	Ongoing (as work proceeds in priority catchments)
10		Landowner assistance programmes continued • Planting materials available for soil conservation work • Information about appropriate mitigation measures according to sediment loss risk • Funding to support planting programmes (specifically proposed for erosion management).	HBRC – Catchment Management, Biodiversity		Plant material available each year Annual Plan funding Readily available information about mitigation measures	Ongoing
11		Ensure best practice information available to landowners/managers in relation to reducing erosion risk and sediment losses (relevant also for nutrient management in action 2.13)	HBRC – Catchment Management Industry Groups		Availability of information to landowners Good practice direction in GAPS and industry programmes	Ongoing
12		Regularly review the uptake of physical improvements/mitigation measures within the catchments to manage erosion risk, in particular within those catchments identified as high erosion risk	HBRC	Catchment collectives Landowners Mana whenua	Short term- increase in total planting and other mitigation measures for erosion management. Long-term[2] reduction in sedimentation of rivers/tributaries and receiving environment	Annual review over the plan lifetime.

[2] Long-term in this instance is envisaged to extend beyond the timeframe of this plan iteration and to continue into future plan iterations.

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Action 3: REDUCE NUTRIENT CONTAMINATION OF FRESHWATER

	Policy Obj	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
13		Preparation of and application of nutrient management plans by high N and P loss risk land uses, using tools such as Overseer, SPASMO, and APSIM. Schedule 3 will identify what these activities are likely to be. Note: Information about where N and P is a problem is part of Schedule 1	All Industry Groups Catchment collectives	HBRC – Environmental Science, Land Science, FEMP Project Coordinator	Farms with nutrient management plans	All high risk properties in priority 1 catchments by 2023 Priority 2 catchments by 2026 Priority 3 catchment by 2029
14		Gather and record data about current land use practices, processes and mitigation measures to reduce contamination, especially in relation to high risk activities e.g. use of tile drains	HBRC – Catchment Management Catchment collectives Industry Groups		A robust database of information within each of the priority catchments	All high risk properties in priority 1 catchments by 2023 Priority 2 catchments by 2026 Priority 3 catchment by 2029
15		Ensure best practice information is available to landowners/managers in relation to reducing nutrient losses (relevant also for sediment management in action 2.9)	Industry Groups	HBRC – Land Management	Availability of information to landowners Inclusion of good practice direction in GAPS and industry programmes	Ongoing
16		In priority catchments develop an inventory of properties likely to exceed a nitrogen loss rate of 20kg/ha/y and ensure preparation of nutrient management plan	Industry groups	HBRC – Catchment Management		Commence 2019 – on-going
17		Information gathering and data management of nutrient loss to monitor the effectiveness of the nutrient management plans and to enable the development of nutrient loads and limits if required.	HBRC – Environmental Information	Industry Groups Consents Compliance	Annual review	Commence 2019 – on going
18		Review the monitoring results to determine whether there have positive trends, and where there have not determine whether alternative measures are available and appropriate to address nutrient contamination freshwater	HBRC Science	Tāngata whenua	Annual review	Ongoing

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Action 4: RIPARIAN MANAGEMENT & STOCK EXCLUSION

	Policy Obj	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
19		Stock including cattle, deer & pigs excluded from rivers, lakes and wetlands in flat/rolling country as priority, and also where bank erosion is identified as a significant and/or long term problem to water quality. This includes the exclusion of sheep unless required as a management tool to promote riparian plant growth and form pest control.	Beef and Lamb Federated Farmers Catchment collectives	HBRC Compliance All Stock-owners adjoining river	Length of waterway with stock exclusion, and type of situation protected (i.e. erodible bank, flat country)	2023
20		Undertake an annual audit of the total expanse of riparian margins which have been fenced and or planted to exclude stock from the river, lake or wetland.	HBRC Catchment Management Landowners Catchment Collectives		Increased annual amount of waterways where stock are excluded.	Annual review for the lifetime of the plan
21		Funding available for riparian planting as part of stock exclusion (promoted as part of managing weed growth and providing biodiversity and water quality values)	HBRC – Strategic Planning Team Biodiversity?	Industry Groups Catchment Collectives	Quantum of grants provided each year	Ongoing
22		Information on useful riparian planting solutions produced – especially for Karamu/Plains in relation to drainage and flooding objectives	HBRC – Biodiversity, Water Quality/Ecology, Marine and Coast, Steve/Ant- Open Spaces Catchment Management	Biodiversity Guardians DOC Fish & Game Mana whenua	Good planting information available	Mid 2019
23		Funding available for riparian planting as part of Karamu/Plains riparian shading programme, giving priority to ecosystem sites which deliver both biodiversity and other outcomes e.g. water quality, erosion control, public access, mahinga kai.	HBRC– Strategic Planning Team Biodiversity Land science, Water Quality/Ecology, Marine and Coast	Industry Groups Catchment collectives	Quantum of grants provided each year	Ongoing
24		Riparian margins assessed and planted for riparian planting and shade in Karamu/Plains	All Industry Groups (esp. Hort groups for Pipfruit, vegetables, kiwifruit) HBRC – Catchment Management,	Catchment collectives	Length of water way assessed, fenced and/or planted. Proportion of waterway shaded.	All properties in priority 1 catchments by 2023 Priority 2 by 2026 Priority 3 by 2029
25		Continue with Te Karamu Strategy and extend to all public land next to rivers	HBRC – Open Spaces, Asset Management Biodiversity Guardians	DOC Fish & Game Mana whenua	Riparian margin register to be developed to identify land suitable for planting	To be compiled within 18 months of notification

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26		Promote and provide information about appropriate riparian planting including information on indigenous local seed sourcing, through education, communications e.g. social media, (especially in conjunction with stock exclusion, fencing, setbacks and within urban developments) 'capacity building' among communities/industries (and even farm plan providers) through workshops. This includes the promotion of assistance and incentives available to farmers for fencing and planting.	HBRC – Communications, Catchment Management, NCC, HDC Mana whenua – Kahutea Strategy	Landowners Schools Fish & Game National Wetland Trust	Success to be measured in the short term by the increase in the number of waterways planted (metres). Acknowledgement that clean water as an outcome could take decades but is the ultimate goal, including reduced sediment loads to the receiving environments (Ahuriri and Waitangi Estuary and the coastal environment)	Ongoing
27		Undertake riparian planting with mana whenua/hapu/marae other community groups and schools	Iwi/hapu/marae/community groups/schools	HBRC – Open Spaces, Catchment Management, EnviroSchools Department of Conservation Fish & Game	Number of planting events per year, number of trees/plants planted	Ongoing – reporting annually
28		Continue Macrophyte growth control in lowland rivers (weed boat cutting and weed removal) ensuring this is programmed to avoid conflict with the native fish spawning season. Continue this as a management tool until other management outcomes take effect (e.g. shading).	HBRC – Environmental Science, Asset Management	Mana whenua	Number of weed boat events per year which avoid conflict with native fish spawning season.	Ongoing
29		Monitor the impact of the riparian programme on water quality and ecology. Review trends of water quality outcomes on habitat and ecosystems.	HBRC Science	DOC Mana whenua	Annual improvements to water quality, habitats and ecology.	Annual review ongoing for the lifetime of the plan

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Action 5: IMPROVE FRESHWATER/ESTUARINE WETLAND & LAKE MANAGEMENT

	Policy Obj	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
30		Continue to develop inventory of wetlands and prioritise in terms of their biodiversity value	HBRC – Land Science, Water Quality/Ecology DOC Biodiversity Guardians of Hawkes Bay Inc.	Forest & Bird Fish and Game	Information about location and state of existing wetlands	2019
31		Enhancing existing and identifying areas where reinstatement and creation of additional wetlands can be created • Restoration of 100ha existing wetland every 5 years • Increase in additional wetland by 5% over 10 years (105ha total) • With a 10% overall increase in additional wetland within the TANK catchments by 2050.	HBRC – Land Science, Water Quality/Ecology, Catchment Management DOC Fish & Game Biodiversity Guardians Mana whenua	Industry Groups Landowners	Restoration of 200ha existing wetland area created within 10 years 105ha additional wetland created within 10 years Long-term time frame of 10% increase by 2050.	Within 10 years from notification
32		Funding available for wetland protection and improvements	HBRC	DOC Central Government Fish & Game Biodiversity Guardians/Trust Mana whenua	Quantum of wetland funding provided	On-going
33		Provide information about • new wetland development and sustainable wetland management • how to manage wetlands to improve cultural, ecological, recreational, food gathering opportunities and outcomes	Biodiversity Guardians of Hawkes Bay Inc.	HBRC – Land Science, Catchment Management, Water Quality/Ecology DOC Fish & Game Mana whenua National Wetland Trust?	Development and dissemination of education material, workshops, social media, communications	Ongoing
34		Promote wetlands as a tool for landowners to improve nutrient and sediment management included in the emission trading scheme? Wetlands contribute sequestering carbon	Industry Groups Landowner collectives Federated Farmers	HBRC – Catchment Management, Communications DOC	Increase number/size of wetlands on private land	Ongoing

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				Fish & Game Mana whenua		
35		Support collectives being established for lake catchments as priority in schedule 3.	Lake Poukawa Trust DOC Fish & Game Landowners	HBRC – Catchment Management, Water Quality/Ecology	Number of collectives established	Ongoing
36		Encourage capacity building/education initiatives and communication around wetlands and lakes for community/industry/farm plan provider.	HBRC – Communications National Wetland Trust	Landowners Schools Fish & Game	Number of education initiatives underway	Ongoing
37		Review and monitor wetland health and existence, and provide reports on the state of the wetlands to help assess the changes seen in the monitoring.	HBRC Science DOC	Mana whenua	Annual monitoring reports	Annual for the lifetime of the plan

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Action 6: REDUCE THE IMPACT OF STORMWATER/WASTEWATER DISCHARGES

	Policy Obj	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
38		Develop/maintain a programme for the creation and implementation of site management plans for 'high risk' activities in urban stormwater areas. Create a Site Management Plan template to assist in assessing risk consistently between TLA's. Set-up monitoring and audit regime in collaboration with TLAs.	NCC and HDC HBRC – Asset Management, Policy, Consents and Compliance	Industrial Sector	Template completion. Programme initiation and number of risk activities with site management plan	Template and programme to be completed within 18 months of notification of Plan Change. Programme and sharing of information ongoing with annual review with an annual audit of the high risk activities.
39		Undertake an urban stormwater network stocktake and establish timetable for developing integrated stormwater management plans including through resource consent processes to include: • Information gathering, • Preparation of catchment management strategies • Ranking of catchments in priority order • Implementation • Monitoring Encourage/maintain MERI – Monitoring, Evaluation, Reporting and Improvement.	HBRC – Asset Management, Consents/ Compliance, NCC and HDC	Property developers	Programme of work for each council Links to LTP and annual plan funding	Programme within 18 months of notification of Plan Change
40		Establish a joint council education programme (for the purpose of educating the public), through collaboration between council staff (e.g. policy, engineers and communications), to develop programme topics, milestones, events etc. to deliver clear messages to the public how to enhance the quality of stormwater, and ultimately our river, estuary and coastal environments.	NCC, HDC, HBRC – Communications, Policy, Asset Management, Catchment Management	HBLASS DOC MfE Statutory Agency Group – Biodiversity Action Plan	Greater community awareness of ways to improve stormwater quality, including reduction of contaminants within the receiving environments (Ahuriri and Waitangi Estuary and the coastal environment)	Implement within 18 months of notification of the Plan Change. Education programme to be ongoing.
41		Carry out review of bylaws and engineering standards for stormwater network design and control of stormwater inputs to ensure consistency and alignment between councils.	HBRC – Consents, Asset Management, Policy,		Bylaws and engineering standards are consistent and aligned	2023

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			NCC, HDC			
42		Encourage and promote wetland creation and other opportunities for increasing stormwater infiltration where feasible within new urban and industrial developments, roading realignment and construction and when installing and designing stormwater networks.	NCC and HDC	HBRC – Policy (Statutory advocacy), Consents, Asset Management	Increased in the number of wetlands within urban and industrial environments	Ongoing
43		Encourage an adaptive management approach (including short, medium and long term actions) to form the basis of applications for discharge consent (larger-scale) that result in material improvements over time in stormwater quality entering our waterways including the Ahuriri and Waitangi estuaries.	NCC, HDC, consent applicants HBRC – Consents, Asset Management,		Receipt of an increased number of discharge consent applications which promote adaptive management	Ongoing
44		Understand and continually review the capacity and flows in sewage networks and the impacts of stormwater inflow and groundwater infiltration, not excluding the impact on the Ahuriri and Waitangi estuaries as the downstream receiving environment. Develop solutions to reduce risks of water contamination by sewage.	NCC HDC	HBRC - Consents	Sewerage net capacity understood Solutions developed and implemented.	2018 onwards
45		Establish joint planning approach to management of existing and new on site wastewater systems. Identify where wastewater poses risks to groundwater and develop joint programmes for resolving groundwater contamination risks from on-site systems, especially those in the aquifer protection areas of the Heretaunga Plains	JWG Drinking Water - NCC, HDC, DHB, HBRC – Policy, Science, Catchment Management		Existing Joint Management Group for drinking water continues to operate	Ongoing
46		Investigate on-site stormwater storage options within new and existing buildings/developments, to ensure appropriate stormwater management e.g. timely release to the network; maintenance of the groundwater quality and quality of stormwater into the receiving environment.	NCC HDC	Developers	Quantum of expenditure on research and investigation.	Ongoing
47		Monitor the urban streams and receiving environments to determine whether the concentration and loads of contaminants within stormwater and wastewater has reduced and resulting in improvements to water quality.	HBRC	NCC HDC	Improvements to the water quality of the urban streams and state of the receiving environments e.g. improvements to DO in urban streams, more fish species noted etc.	Ongoing

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Action 7: IMPROVE WATER ALLOCATION/USE EFFICIENCY

	Policy Obj	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
48		Develop the IRRICALC water allocation model to provide consistent water demand calculations for range of crops in Hawkes Bay	HBRC – Environmental Science	Industry Groups Plant and Food/Aqualinc INZ	Accurate and consistent models for determining water demand are available	End 2019 [3]
49		Continue to develop innovative, flexible and efficient water management systems that maximise water efficiency and water use	HBRC – Environmental Information Industry Groups Water users and irrigators	Landwise	Alternative water management frameworks developed. Water use efficiency improves to 80%	Ongoing
50		The development of web-based information management systems to support flexible water management	HBRC – IT, Environmental Information	Permit holders INZ Industry groups	Web-based systems being available	
51		Design operation and management options for stream flow enhancement.	HBRC – Engineering	Permit holders in affected streams	Scheme designed and constructed. Stream flow monitoring shows it is enhanced.	List of streams and dates still required
52		Continue to develop understanding, technology and uptake of efficient water use systems and technology including through irrigation efficiency promotions	HBRC – Environmental Science, Catchment Management	INZ	Quantum of expenditure on efficiency programmes Water use is efficiency improves to 80%	Ongoing
53		Continue to develop understanding, technology and uptake of efficient water use systems and technology including through monitoring, measuring and reporting urban water use, supply and demand, and projecting growth demands	NCC HDC	MfE	Measures of urban water use efficiency developed Water use efficiency meeting an Infrastructure Leakage Index of 4.	
54		Establish a joint planning approach to management of risks to un-reticulated domestic water supplies. Identify where water supplies pose quality or quantity risks to communities and develop programmes for resolving issues, especially for	JWG Drinking Water - NCC, HDC, DHB, HBRC – Policy, Science, Land Management	Marae (mana whenua)	Joint management group established by end 2019	Ongoing

[3] This is being built in to this fianancial years (2018-19) work programme but needs to be confirmed to bring this forward so that the model is available in advance of the May 2019 consent renewals

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		communities in the margins of the Heretaunga Plains where groundwater levels pose a risk (also see item 38)				
55		Investigate alternative ways to retain water within the landscape (not limited to wetlands) e.g. • Increasing organic matter and water holding capacity • Changing management of land subsurface drainage systems • Other options Trial and Implementation of alternative options to improve water use efficiency.	Industry Groups Landowner Collectives	HBRC Science	Investment in research and investigation	Ongoing

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Action 8: INCREASE ECOSYSTEM HEALTH AND BIODIVERSITY

	Policy Obj	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
56		Continue to work with landowners and mana whenua through annual asset management plans to improve fish spawning of both indigenous species and trout in areas identified as appropriate spawning sites.	Mana whenua Landowners HBRC	Fish & Game NCC HDC DOC	Increased fish spawning habitat	Ongoing
57		Work with all the custodian of lands/wetlands to enhance indigenous vegetation by protecting existing and new planting.	HBRC – Land science, Biodiversity Guardians	DOC Mana Whenua Landowners	Indigenous vegetation cover and increased ecological integrity of streams Sediment load in streams	Ongoing
58		Increase connectivity of waterbodies and terrestrial ecosystems.	HBRC – Land science, Biodiversity Guardians	DOC Mana Whenua Landowners	Species dispersal and health (e.g. migratory fish, birds, plants).	Ongoing
59		Identify location of existing pumps where they inhibit fish passage to and from Ahuriri & Waitangi Estuary in particular (but not limited to the estuaries). Develop a programme for upgrading existing pumps or providing alternative solutions to enable fish passage.	HBRC – Land science, Biodiversity Guardians	Mana whenua DOC Fish & Game	Phasing out of existing pumps. Increased fish passage/movement.	Ongoing.
60		Monitor the health and number of fish species (native and trout) within the TANK Catchments. Review trends over the lifetime of the plan to determine whether mitigation measures to improve water quality have resulted in improvements to ecosystem health and biodiversity.	HBRC – Land science, Biodiversity Guardians	Mana whenua DOC Fish & Game	Increased numbers and improved health of fish species	Review annually for the lifetime of the plan
61		Monitor the quantum of indigenous planting (aquatic and terrestrial) within the TANK catchments. Review if trends occur between increased native vegetation and improvements to biodiversity and ecosystem health.	HBRC – Land science, Biodiversity Guardians	Mana whenua DOC Forest & Bird Landowners	Increased quantum of native vegetation. Positive correlation between planting and biodiversity.	Review annually for the lifetime of the plan

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Action 9: ONGOING COMMUNICATION, COMMITMENT & INVOLVEMENT

	Policy Obj	TASK DESCRIPTION	LEAD AGENCY	PARTNERS	MEASURED BY	TIMEFRAME
62		Communicate progress to the wider community made toward meeting TANK Plan objectives	HBRC Communications		Fast facts progress	Ongoing
63		Regularly inform the public of community projects (such as riparian planting days) and identify ways in which they can be involved in organised events via website, Facebook, community newspapers etc.	HBRC – Communications, Land Management	Biodiversity guardians Mana whenua Community Groups	Number of people in attendance & number of events	Ongoing
64		Install river name signage throughout the catchments, this will provide people with a sense of place and ownership over the waterway and surrounding environment.	HBRC – Open Spaces, Works Group, Asset Management, NCC, HDC	Mana whenua Community Groups	Number of waterways 'named'	Ongoing
65		Support riverside and estuary based activities which bring people to the waterways. E.g. HB Trail cycling events, Country 2 Coast, HB Marathon, Iron Māori etc.	HBRC – Transport Planning, Open Spaces, Communications, NCC, HDC, Tourism HB, Recreational Industries		Number of events each year	Ongoing

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Action 10: INVESTIGATIONS AND MONITORING

	Policy Obj	TASK DESCRIPTION	LEAD AGENCIES	PARTNERS	MEASURED BY	TIMEFRAME
66		Develop an Investigation and Research Programme for the Ahuriri Estuary and Waitangi Estuary to better understand hydrology and water flows, contaminant inputs, estuary flows and function. Collect and collate data on sediment accumulation and algal growth, to include investigation/monitoring of sediment loads in the receiving environments and developing further understanding of its impact.	HBRC – Water Quality/Ecology, Marine and Coast, NCC Mana whenua/Mana Ahuriri Trust	DOC, DHB, Te Taiao Environmental Forum, Forest & Bird, Ahuriri Estuary Protection Society, Landcorp and HB Airport	Better understanding about estuary functioning	Ongoing
67		Undertake further research and investigation into: • Nutrient pathways, concentrations and loads in rivers and coastal receiving environments • Nutrient uptake and loss pathways • Measures to reduce nutrient loss	HBRC – Land Science, Water Quality/Ecology, Industry Groups	Industry groups Catchment collectives Sustainable Farming Fund MPI	Improved understanding about sources and pathways Improved understanding about mitigation measures	Ongoing
68		Develop mitigations or land management responses to address nutrient loss risks in tile drained land	HBRC – Land Management, Land Science, Water Quality/Ecology Industry groups/land owners (Heretaunga plains)	Catchment collectives	Development of management and mitigation measures	Commencing 2025
69		Increase monitoring of different metrics that better capture overall Ecosystem Health	HBRC – Environmental Information	Mana whenua, NIWA	Annual reporting SOE monitoring	Ongoing
70		Develop protocols, make tools, guides and workshops available to landowners, marae/hapu and community groups to monitor water quality. Including developing clarity around the various levels of public monitoring available and the required outputs from each level (dependant on reason for undertaking monitoring) • Citizen science/local scale monitoring • Schools/education programmes • Kaitiakitanga/Matauranga Māori • On-Farm monitoring • Higher level independent monitoring (similar to SOE)	HBRC –, Land Science, Environmental Science	HBRC, Beef + Lamb, Mana whenua Federated Farmers NIWA MPI	Water quality data is collected by catchment collectives, marae/hapu and community groups	Ongoing

TANK DRAFT IMPLEMENTATION PLAN

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		Develop templates for higher level monitoring, and provide support for all other levels of monitoring. Seek funding where available from central government.				
71		Establish information management systems to collate and report on data collected by community groups and collectives	HBRC – Environmental Information	NIWA LAWA	Information gathered is valued and used	Ongoing
72		Undertake ongoing investigations to better understand the Heretaunga Aquifer and the consequences of increasing or decreasing abstraction in order to establish a sustainable equilibrium that reflects the precautionary principle and climate change trends over time.	HBRC		Information gathered is valued and used in future plan development and decision making.	Ongoing
73		Continue the development of the Matauranga Māori stocktake and development of Matauranga Māori monitoring programme to be aligned with SoE programme as necessary. Recognition of cultural memory.	HBRC – Environmental Science, policy (SIG, RMG) Mana whenua, Biodiversity Guardians of HB Inc. Soc.	NCC HDC	Matauranga Māori monitoring framework developed and implemented	Ongoing
74		Monitoring and recording gravel deposition within the bed of the Karamū	Mana whenua	HBRC	Provide an annual report to HBRC	Ongoing

Hawke's Bay Regional Resource Management Plan

TANK Plan Change Document

Peer Review Findings

Context

The Hawke's Bay Regional Council is working through a collaborative process to establish water quality and quantity objectives and limits for the Tutaekuri, Ahuriri, Ngaruroro and Karamu Rivers and their tributaries (collectively comprising the TANK catchments).

The key reason for the extent of the study area is the interconnectedness of the Heretaunga Plains aquifer systems with the surface water catchments – Karamu, Ngaruroro, Tutaekuri and Tutaekuri-Waimate, Ahuriri and the Taipo and Napier urban waterways.

The main emphasis of this plan change process is to set water quality and quantity objectives and limits to meet the needs of the values for which water is to be managed. Methods to achieve desired outcomes will influence the use of water and land, particularly land used for horticulture and agriculture. The plan change is to be proposed as amendments to the Hawke's Bay Regional Resource Management Plan (RRMP) which is a 2nd Generation combined Regional Policy Statement and regional plan that became operative in 2006. The TANK plan change is one of HBRC's key workstreams to progressively implement the National Policy Statement for Freshwater Management 2017.

The TANK plan change will bring into effect new methods (including rules) to manage land and water in the TANK catchment. These methods will include allocation limits and a regime to manage flows in the rivers, which will also affect groundwater users. At the same time water quality objectives are to be set and a regime of statutory and non-statutory methods implemented to improve the quality of water in these waterbodies. In some instances, the methods will affect, and require new, land use practices.

By way of summary only, but to provide context to the peer review, the following sets out the principal issues faced by each of the catchments, surface and groundwater and which the plan change is focused upon addressing:

- Karamu/Clive Rivers – too many weeds, insufficient bugs and insects, low oxygen, high nutrient levels, urban stormwater discharges
- Tutaekuri/Ngaruroro – sediment and phosphorus in rivers, water quality in the estuary and the coastal waters
- Ahuriri – sediment, nutrients, urban stormwater, contaminants, pest organisms
- Groundwater – Heretaunga Plains water is very interconnected; all groundwater takes deplete lowland rivers and streams; any total take restriction will have very little river flow impact; recharge must offset total abstraction to prevent long-term aquifer depletion; security of supply standards must be reasonable
- Surface water – surface water and groundwater takes across the Heretaunga Plains deplete Ngaruroro/Tutaekuri river flows, these rivers add groundwater flow to Heretaunga Plains

and lowland rivers; river flows must be sufficient to meet healthy ecosystem, mauri and other core values; security of supply standards must be reasonable.

The development of the TANK plan change has been dependant on input from the TANK Collaborative Stakeholder Group (TANK Group) through recommendations. This has resulted in an iterative approach to plan drafting and has resulted in the peer review being confined to working (although substantially complete) drafts of the plan change.

The Project

The peer review of TANK Plan Change (PC9) has been designed to determine whether the Plan Change achieves the project outcomes; whether the provisions of the Plan Change work; and to identify whether there are any gaps in the provisions and/or linkages with the parent plan (RRMP).

This peer review has been undertaken as follows:

- attendance at a briefing meeting to confirm the TANK project outcomes and receive a briefing on the key issues to be addressed in the plan change and the methods to address those issues;
- undertake an evaluation of the drafted plan provisions and provide feedback to Council;
- complete a further review of amended plan provisions;
- attendance at workshops to discuss draft findings and assist with provision drafting; and
- preparation of this report.

The plan change comprises several parts as follows:

- a statement of issues
- TANK objectives
- TANK policies
- Explanations and principal reasons
- TANK rules
- Proposed amendments to HBRRMP rules
- A series of schedules to assist with implementing the rules.

The peer review was first completed on the version of the Plan Change dated 31 May 2018. Due to the stage reached with the collaborative TANK Group, this version was incomplete. It did, however, contain a largely complete suite of objectives, policies and rules (although some of the detail was omitted because it had not been landed by the TANK Group) and a partially complete suite of schedules.

The first review was reported back to Council through margin notes on an electronic version of the document. Those margin notes raised questions regarding the provisions, how they worked, the language used, as well as questioning some of the content in terms of the need for it. A conference call discussion was convened to discuss the matters raised. This occurred during a period of continuous amendment to and development of the plan change.

The second review was completed on a version dated 26 July 2018 (that date being the date the version was due to be discussed with the TANK Group rather than the date on which it was prepared). This version was significantly more complete, but it was not until the workshop at which this review was discussed that some of the critical elements were available (eg Tables 1 and 2 – now

Schedules 1 and 2). This did not detract in any material way from the peer review I was able to undertake. My review was not about questioning the content of those table/schedules but rather was concerned with how they were integrated into the plan change.

Findings

General

As a starting point it has been necessary to determine the project objectives. The clearest enunciation of these is to be found in the TANK Group terms of reference, coupled with the general 'flavour' of the operative HBRRMP.

Specific to this project the objectives can be summarised as:

- Identify the various values for each waterbody within the TANK catchment
- Establish plan provisions that provide for those values either through enabling specified activities or placing restrictions on activities while providing for economic activity and environmental protection or enhancement (as appropriate)
- Establish water quality and water quantity limits and targets (to address over-allocation) where the allocation status is determined by reference to the identified values.

In considering how well the plan change achieves these objectives I have considered how well it fits with the operative provisions of the RRMP, the specific text of the plan change, and whether the provisions leave any gaps the exploitation of which could undermine the achievement of the objectives.

The success of the plan change requires a paradigm shift in terms of how land uses are undertaken, and such a shift would normally be supported by directive regulation. That is not the case here. However, on the understanding that resource management within the RRMP is focussed less on regulation and more on enablement of activities coupled with education, voluntary compliance and Council funded and managed programmes, the TANK plan change is consistent with the parent plan, is likely to achieve the environmental outcomes sought, and therefore will achieve the project objectives.

A consistent theme throughout the peer review has been the architecture of the provisions and the consequences of this for plan accessibility, understandability, readability and enforceability. Amendments have been made in response to suggestions and all of the issues identified have been corrected.

The difficulties of accommodating collaboratively agreed solutions to resource management issues are becoming widely known. This plan change is no different and there are, arising from this, one or two instances where either the drafting is incomplete at this time or the drafting is less than optimal. When the gaps in the drafting are filled the solutions package will be completed. Any remaining significant drafting issues can be resolved through the submission process but as a general observation, the plan change provisions are internally consistent, there are no obvious gaps, and there is consistency with the parent plan.

Finally, under this heading it is necessary to observe that the text of the plan change would benefit from a thorough editorial review (spelling, layout and numbering, grammar) once the drafting is complete. This review is unlikely to reveal and resource management content issues but will ensure full workability of the provisions.

Objectives

During the course of the review a number of key questions were raised regarding the draft objectives. These questions covered matters of the architecture or construction of the provisions, their content, and their complexity in terms of matters included within a single objective.

Of particular concern during the initial review was the inclusion of what can best be described as 'process objectives' as compared to 'outcome objectives'. This matter was discussed in some detail, some amendments were made to the text, their place within the RRMP was better understood and as a result they have been retained.

The architecture that caused the most concern arose principally from the length of some of the objectives, and as a result the use of numbered lists with the objective. This issue has been resolved through breaking into its separate component parts those offending objectives. In addition, some minor editorial amendments have overcome issues of complexity and readability without taking anything away from the purpose or intent of the objective.

Policies

A wide range of issues were raised during the review of the draft policies. These included:

- Policy subject matter – policies of process compared to policies of outcome and whether or not these should be relocated to either the implementation plan or at end of each topic area
- The general length of some of the policies – the concern being the consequent complexity of the message, internal consistency, and overall readability
- Issues with integration between the policies and operative RRMP provisions
- Links between the policies and the rules or other methods
- Consistency of language – both within and between different policies (for example the use of "good" and "best" practice)
- The issue with using fixed numbers arising from the application of OVERSEER and in particular the effects of the regular updates to OVERSEER on the status (permitted or requiring resource consent) of land use activities
- The general workability of collectives, particularly how they are "approved" and then held to account for achieving outcomes
- The issue of "approving" Farm Environment Plans
- Whether or not a plan can constrain abstractions that are permitted by S14(3)(b) of the RMA
- The issue of the use of prohibited activity status to ensure resource limits are not breached
- Issues around dams and out of river storage facilities and the potential need to separate these because their effects are different.

Policies are designed to implement objectives. If the objective is the outcome or end state to be reached, then the policies are the road-map. In reviewing the draft policies this has been a key consideration.

Through a process of iteration and discussion each of the issues raised concerning the policies in general or the drafting of any particular policy have been resolved. The result is a suite of policies that tell the story of how the objectives will be achieved, signal what involvement can be expected from the Council in this process, and provide direction to a consent authority when called upon to assess an application for resource consent. The language used is certain, concise, and clear while consistent with that used in the parent plan.

Explanations and principal reasons

Explanations and principal reasons are not a mandatory part of a regional plan. While they can be useful they are sometimes rather problematic in that they can result in inconsistencies of interpretation. Further, they add unnecessary length to the document.

If an objective or policy requires explanation the question should be asked whether the expression could be improved so that the intent and meaning is absolutely clear and does not require explanation.

If it is felt that some capturing of the principal reasons is required then the better place for this might be the Section 32 Report. This is the place that plan readers should turn to when they are looking for an explanation of the reasons behind particular plan provisions. Further, during the public submission phase of plan development there is a very real possibility that provisions will be amended. Any amendments must be reported on in a s32AA report prepared by the decision-maker. By having all explanations and reasons in a single place it is possible to keep those matters current.

Removal of this section of the plan change has been suggested and agreed.

Rules

During the review of the rules section of the plan change a wide range of matters were raised. These included:

- The general structure of the rules, including the ordering and layout of the various components of each rule; provisions for dealing with non-compliance with rule conditions; consistency and certainty of language used; legality of the proposal
- The use of controlled activity status (where consent must be granted) for dealing with non-compliance with rule provisions
- Specificity of the wording used; clarity of meaning and application of the various rule components; use of "or" and "and" in rules lists and the implications of this for rule interpretation and application
- How the necessary amendments to Rule 7 in the RRMP are best expressed and identified in the plan change
- Issues concerning the restrictions proposed around water takes provided for in S14(3)(b) of the RMA
- Whether or not it would be appropriate to use prohibited status to avoid a limit being breached
- The issue of satisfactorily defining "land use change" so that the environmental outcomes can be achieved
- The particular wording of the stormwater provisions and the timing of their implementation

Rules in plans implement the policies. They must be unambiguous, certain and clearly expressed. And for a permitted activity rule they must not be reliant upon any third-party input.

As occurred with the review of the policies, improvements which achieved all these basic drafting requirements has resulted from an iterative process. That process included: identification of the omission, confusion, lack of clarity or lack of certainty; discussion regarding the outcome sought or purpose of the rule; redrafting. This has been an iterative process, but the issues identified during the course of the peer review have now been satisfactorily addressed.

Further improvements could be made, and probably will be made during the submission process but the rules as they presently are drafted are fit for purpose and should, if implemented as intended and supported by non-statutory interventions and actions, achieve the objectives of the plan change.

Schedules

Final versions of many of the schedules have not been available for review as part of this project although the general content and intent of those incomplete schedules has been discussed. The proposed schedules are an important part of the regulatory framework and are a key element in making the rules work.

From the initial review, the following key issues were identified:

- Landowner collective and industry programme – how was this going to work and how was it going to be enforced (because it is a key component of the resource management regime)
- Uncertainty regarding the process for 'approval' of land owner collectives and farm environment plans
- How "land use change" can be satisfactorily defined in Schedule 2 so that the rules will work and the outcomes will be achieved

Further, during the review it was decided to move Tables 1 and 2 from the objectives into the Schedules. This move is supported because in that location they will be more readily accessible.

The issues identified in respect of what had until recently been identified as Schedule 1 (Landowner collectives, etc) have been resolved through the addition of new content and the redrafting of other content. Given the style of plan being prepared, and the emphasis on non-statutory methods to achieve catchment wide outcomes, that schedule is considered to be fit for purpose. There remains a concern about enforceability where non-performance is identified or where objectives are not being achieved but those matters can be addressed through a future plan change should the need actually arise.

At the time of writing this report the issue of land use change remains unresolved. This same comment applies to the remaining incomplete schedules.

Conclusion

Based on my understanding of the objectives of the TANK plan change project, my review of the plan change documents, discussions with Council staff and the amendments to the document that have arisen from both the review and those discussions, it is my opinion that the plan change is fit for purpose, is consistent with the parent plan (RRMP) and the provisions will achieve the environmental outcomes sought by the TANK Group. Further, the plan change meets requirements of the Resource Management Act 1991.

Peter Constantine

24 July 2018

About the Peer Reviewer

Peter holds the degrees Bachelor of Arts (Sociology and Geography) and Bachelor of Town Planning. He is a Full Member of the New Zealand Planning Institute. He has been practising planning since 1977.

Peter has more than 40 years diverse planning and resource management experience ranging from district and regional plan preparation, to urban design and heritage conservation and resource consenting for a wide variety of land use activities.

His particular skills and expertise are in the areas of plan and plan change preparation and Schedule 1 processes, planning assistance to hearing panels during deliberations, and the management of application and appeal processes. Peter is an accredited hearing commissioner and holds the chair endorsement.

Peter is an active participant in the New Zealand Planning Institute having held the position of Branch Chairperson of the Otago Branch and the Nelson/Marlborough Branch and he has served as a Councillor on the national body of the Institute. For 8 years Peter sat on the Board of Studies for the Master of Planning programme at Otago University and also was an occasional lecturer on that programme.

In November 2017 Peter established PlanWrite, a specialised consultancy established specifically to help councils achieve the environmental outcomes they seek from plan change and plan review processes; and to provide hearing commissioner services.

Between May 2011 and November 2017, Peter held the position of Principal Planning Advisor in the Strategy and Planning Directorate at Canterbury Regional Council. In this role the full range of Peter's planning expertise and experience was called upon as the Council embarked on and successfully concluded an ambitious plan review process pursuant to the provisions of the Environment Canterbury Act 2010.

This work programme involved the comprehensive review of freshwater and land management plans, the designing writing and promulgation of a new integrated and comprehensive instrument that met the requirements of all higher order instruments (regional policy statement, national policy statement for freshwater management) as well as assisting with the implementation and attainment of the vision and principles of the Canterbury Water Management Strategy.

This plan was designed to set out provisions that set the region-wide policy direction and would have region-wide application while also enabling community-based catchment solutions for water quality and quantity to be incorporated over a period of time. To date the LWRP has been made operative and 5 sub-region sections (each promulgated independently) have been completed. In addition, an omnibus tidy up plan change has been completed.

In parallel with the LWRP, Peter was involved with the review of the Canterbury Air Regional Plan. He assisted with provision drafting, report reviews and preparation of the 'decisions-version' of the Plan.

During this period Peter's skills were extensively used as the planner assisting the independent hearing panels appointed by Council to hear and make recommendations on submission on the various planning instruments.

This involved the provision of expert advice on the implications of policy and rule redrafting being contemplated by the hearing panels; detailed review of decision tables to ensure decisions are consistent with recommended amendments to the plan; cross-referencing recommended plan amendments with submission points (to demonstrate scope); and editorial assistance with recommendation reports.

Peter has also provided input to a number of submissions on proposed legislation, national policy statements and the national planning standard.

Between February 2008 and April 2011 Peter held the position of Principal Planner at Marlborough District Council. The key responsibilities of this position were to promote best practice amongst the resource consents team, to up-skill the individuals within that diverse team, to assist with resource management plan and legislation interpretation, to provide technical advice to Council's Hearings Committees, to act as peer reviewer in respect of hearings reports, to manage all objections and appeals against Council's decisions on resource consent applications, and to provide technical and strategic advice to other departments of Council.

Prior to his time at Marlborough District Council Peter was a consultant planner with Beca Limited and on his own account. As a consultant Peter was involved with plan reviews on behalf of both public and private sector clients; acted for private and public sector clients in respect of applications for resource consents and notices of requirement for a wide variety of land use and resource use projects.

Greater Heretaunga and Ahuriri (TANK) Collaborative Stakeholder Group Terms of Reference

as updated October 2014, April 2016 and May 2018

1. Purpose

This document updates the TANK Group's Terms of Reference which were adopted in 2012 to reflect the extension of the project timeframe through to 2017.

The purpose of this document is to describe and update the Context, Role and Operating Procedures for a Collaborative Stakeholder Group (the TANK Group).

The TANK Group has been convened to provide recommendations to the Regional Planning Committee for the management of land and water in the Greater Heretaunga and Ahuriri catchment area, comprising the Tutaekuri, Ahuriri, Ngaruroro and Karamu catchments and associated estuarine and coastal receiving environments.

The TANK Group will identify values, and recommend objectives, policies, rules and other methods to be included in the Regional Resource Management Plan (RRMP) to provide for those values. This area, including the coastal environments, will be colloquially referred to as the TANK catchments.

2. Study Area – TANK catchments

The study area is shown in Appendix 1. The key reason for the extent of the study area is the interconnectedness of the Heretaunga Plains aquifer systems with the surface water catchments – Karamu, Ngaruroro, Tutaekuri and Tutaekuri-Waimate, Ahuriri and the Taipo and Napier urban waterways. Some areas are more connected than others. The area will be broken down into manageable hydrological units which take into account the need to integrate the groundwater resource.

3. Key Drivers

There are some 3600 current consents in the TANK catchment area representing approximately half of the region's consented activity. Of these, some 2500 (approx. 70%) relate to the taking and use of surface water and groundwater. The bulk of the Ngaruroro and Maraekakaho takes expired in 2015, and the majority of the Tutaekuri consents expire in 2018. The majority of the groundwater takes from the Heretaunga Plains unconfined aquifer expire in 2019. The Karamu catchment consents expired in 2013.

The Ngaruroro catchment is at full allocation and the Karamu catchment is currently considered to be over allocated, largely by virtue of the Regional Resource Management Plan setting zero allocation limits. Issues have also been raised about the methodology for setting the minimum flows in the current plan. The minimum flows need to be reviewed.

In addition, the National Policy Statement for Freshwater Management (NPS), originally released in 2011, subsequently revised and came into effect in 1 August 2014, requires regional councils to set freshwater objectives, water allocation limits and water quality targets for every water body, so that overall quality of fresh water in the region is maintained or improved. There are no allocation limits in the RRMP for the Heretaunga Plains aquifer systems and the RRMP only contains water quality guidelines.

Council has given the assurance that it will provide clearer policy direction for upcoming consent processes for both applicants and submitters alike.

4. Planning Context

The planning framework within which the TANK Group is to function includes a variety of legislative requirements and both statutory planning instruments and non-statutory processes and documents as shown in Figure 1. A detailed explanation of the planning framework is provided in Appendix 2. As well as these, the TANK Group should also take into account the principles of the Treaty of Waitangi, iwi and hapū planning documents, and other agency and industry strategies. A list of relevant supporting documents will be provided to and discussed with the TANK Group as the collaborative process evolves.

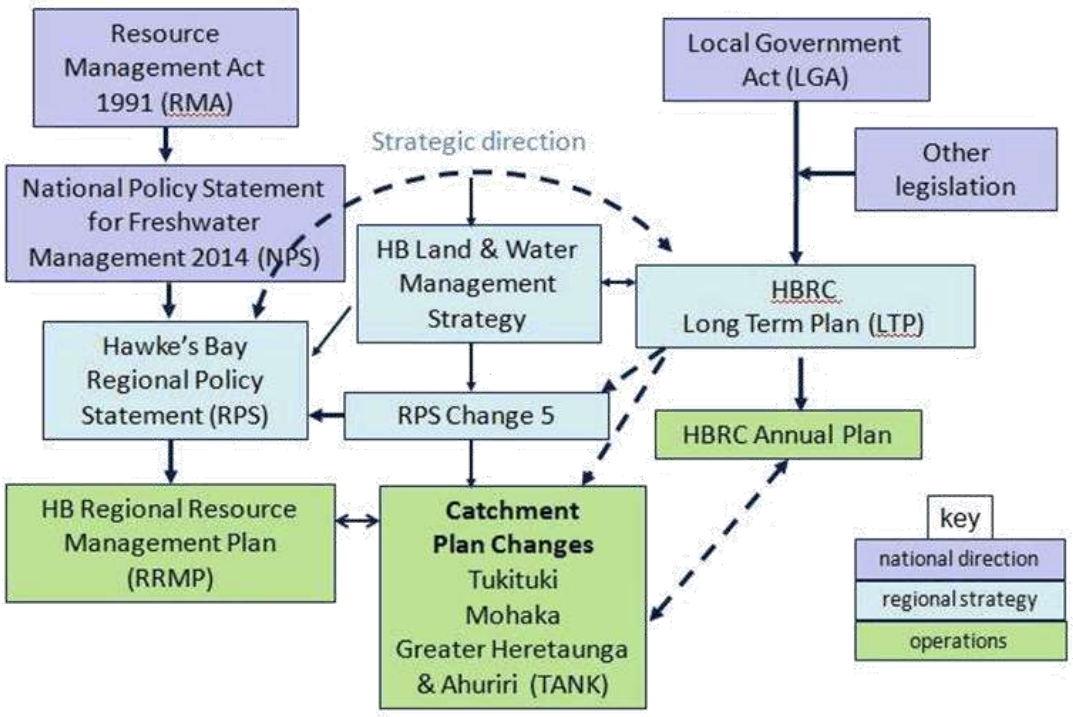


Figure 1 Greater Heretaunga and Ahuriri Plan Change planning framework

5. Role of the TANK Group

The TANK Group is undertaking a collaborative stakeholder process with the aim of providing the Council (via the Regional Planning Committee) with consensus recommendations regarding objectives, policies and methods, including rules for a plan change to the RRMP for the Greater Heretaunga and Ahuriri catchment area. To provide those recommendations, the TANK Group does not start from a blank canvas, nor operate in a silo as outlined in Section 4, Planning Context.

The Regional Planning Committee has agreed to have particular regard to any TANK consensus outcome, if one emerges[1], and the Regional Council has given a good faith undertaking to implement the recommendations of the TANK Group[2]. Any recommendations must also be consistent with the following higher level documents:

- Resource Management Act
- National Policy Statements
- National Environmental Standards
- Regional Policy Statement

6. Membership and relationships

All members of the TANK Group have been nominated by their respective sector or group to be their representative and as such are expected to convey ideas and perspectives from their wider networks. However, the views expressed by members will be assumed to be their own until such time as they have been formally endorsed by their wider networks. A subsequent process, with a reasonable timeframe (to be decided by the TANK Group), will be required to get formal endorsement.

The TANK Group will adopt measures and processes to ensure that local iwi/hapū, community and TANK sectors and groups are informed and have opportunity for input and provide comment on the work of the Group. This includes through the establishment, as necessary, of working groups or communication strategies that provide regular updates about TANK Group outputs and provide opportunities for community and stakeholder feedback.

Some important points to remember about being a TANK Group member:

- A meeting allowance will be available for those who are not paid representatives for a particular interest.
- Members are expected to make every effort to attend all meetings. Between sessions, members will be expected to interact with their wider networks to obtain feedback on policy options.
- The Group has been working together for an extended period and a further two years is required to complete the decision making and produce a draft plan change. A commitment to regular attendance will be critical for continuity and consistency for this time. Substitutes (temporary) and replacements (permanent) are therefore discouraged. Any

[1] Regional Planning Committee Resolution, 19 February 2014.

[2] Regional Council Resolution, 29 August 2012

substitute or replacement must be pre-agreed with the Independent Facilitator and must be well briefed by the member they are replacing in advance of the meeting.

- If a meeting is missed, or if a substitute does participate, members will be expected to "catch up" and to raise any concerns arising from that meeting with the Independent Facilitator no later than the next meeting.
    - Time will not generally be provided within subsequent meetings to re-visit issues already addressed or resolved in the missed meeting unless new and relevant information is provided. Re-visitation of issues will be at the discretion of the Independent Facilitator.

7. Protocol for collaborative deliberation

This process is not just another consultation exercise – it is a new way of decision-making. Rather than simply advocating for a particular point of view, participants will be expected to explore, consider and deliberate on solutions that accommodate diverse views and interests, and to refrain from tactics that are divisive.

The protocol includes matters relating to respect, communication and consensus decision making:

Respect and Communication

- Members must be willing to participate cooperatively for the "greater good" of sustainable water resource management in the TANK catchments.
- All members agree to act in good faith. This means that members must commit to open, honest, constructive, robust and collaborative deliberations. To this end, we will follow the Chatham House Rule. This means that participants are free to discuss aspects of the process with other parties (excluding debating issues through media channels, see point below) but shall not attribute speakers or their affiliations to discussed options or opinions.
- TANK Group meetings are not open to the public; however Meeting Records and the list of participants will be made public.
- Contributions made within the Group will be "without prejudice". That is, nothing said within the Group may be used in a subsequent planning or legal process except for any recommendations and agreements reached by the Group.
- Members agree to refrain from debating issues through public media channels and to keep the debate within the TANK Group.
- Members agree to show restraint and respect for other views when communicating with wider networks and to avoid promoting discord within the group.
- Any public statement about discussions or decisions by the group must be agreed by the group and made through an agreed spokesperson. This also applies to researchers, council staff and others who attend the meetings in support of the TANK Group.

The Group may add to this protocol by unanimous decision making. Any agreed additions are collated and appended to the Terms of Reference as an addendum.

Consensus decision making

- The group will strive to make decisions by consensus. Consensus is defined as every member (i.e. 100%) of the group agreeing that they accept the group's recommendations to Council.

- At the end of the process, members and their networks will be asked to formally endorse and sign any recommendations that have been reached by consensus.
- Where 100% consensus cannot be reached on a topic or specific point, the reasons for disagreement will be noted, any alternatives defined, and the reasons for positions on the alternatives recorded.
- If the group reaches a consensus, members will be expected to support that consensus in subsequent public discussion, including appearing at any subsequent hearing if requested.

8. Council and Council staff roles

The HBRC, through its Regional Planning Committee, has established and is resourcing and supporting a collaborative approach to reaching broad agreement on, and developing recommendations for future water management by the TANK Group.

HBRC staff will be assigned to assist and support the TANK Group in delivering the required outputs within the agreed timeframes.

Members of the Regional Planning Committee, both councillors and tangata whenua representatives, may attend TANK meetings as observers with speaking rights. For clarity, members of the Regional Planning Committee are not to take part in TANK Group decision making to ensure a clear separation, both actual and perceived, between statutory governance and the advisory role of the TANK group.

The TANK Group will regularly update the RPC about its work. This update will coincide with scheduled RPC meetings and may also include special meetings if necessary. The TANK Group does not have the authority to commit the Council to any path or expenditure.

Officers from the Napier City and Hastings District Councils have been appointed to the TANK Group to represent the interests of these local authorities.

9. Role of facilitator

Most meetings of the TANK Group will be led by an independent facilitator, who will:

- Ensure a fair and equitable group process
- Foster an atmosphere of respect, open-mindedness and group learning
- Design an enjoyable and productive process to enable the group to achieve its task
- Facilitate input from all members of the group, so that every voice is heard
- Provide guidance on collaborative deliberation techniques, including constructive ways to voice disagreements and negotiate potential conflicts.
- Manage discussion and decision making processes in a way that assists with meeting the objectives for each meeting within the agreed timeframes and according to agreed protocols.
- Support as necessary, operation of any working group formed by the TANK group to assist the Group in its decision making.

10. Work Programme

The TANK Group will adopt a Work Programme with agreed timeframes required to deliver the outcomes specified. The Work Programme will be regularly reviewed and progress reported to the RPC.

There are four main phases for this project (Phase 1 has been completed) and the TANK Group will be involved in all four phases.

Phase 1 (completed)

Identification of values, objectives, and general agreements on approaches for developing policy options for a plan change.

Output: a document detailing interim agreements and any areas where agreement could not be reached, for presentation to the Regional Council's Regional Planning Committee.

The TANK Group held 11 meetings between October 2012 and December 2013 and reached interim agreement on a number of topics. These are captured in the report *Collaborative decision making for freshwater resources in the Greater Heretaunga and Ahuriri Region: TANK Group Report 1 – Interim Agreements ("Phase 1 - TANK report")*. These 11 meetings and the TANK Report will be referred to as "Phase 1" of the TANK process.

The interim agreements in the Phase 1 - TANK Report are "supported in principle" by most parties but not all. The areas of disagreement will be addressed in the early stages of Phase 2 of the TANK Group process.

Phase 1 - TANK Report will be used as a foundation document for progressing through Phases 2 and 3 of the TANK process (outlined below).

Phase 2

Building on and, where necessary, amending Phase 1 Interim Agreements to develop and evaluate policy options including determining appropriate limits/thresholds (quantity and quality) and/or methods for setting them. This phase will require further assessment of subcatchment level values and objectives.

Outputs: agreement on objectives, attributes and desired attribute states for identified water bodies or groups of water bodies in relation to the identified agreed values for which the water bodies are to be managed.

Agreement on the policies and methods that will be used to achieve the stated objectives for each water body or group of water bodies and identification of alternatives on any areas where agreement could not be reached, for presentation to Council's Regional Planning Committee.

Phase 3

Plan Change writing to incorporate any preferred/agreed policy response arising out of Phases 1 and 2 into the Regional Resource Management Plan. During Phase 3, the TANK Group will meet as required to make further recommendations on issues that arise during drafting of the plan change.

Public consultation on a draft plan change may be undertaken in partnership with the RPC, ahead of formal notification, if deemed a necessary supplement to the public and hapū/whanau engagement programme.

Outputs: a draft Plan Change ready for consideration and approval by the Regional Planning Committee by end of 2017 and a report on the TANK process (to inform Council's section 32 RMA evaluation report).

Phase 4

Consideration of the proposed plan change by RPC and subsequent recommendation to the Council for either public or targeted consultation on draft, or should public engagement have been sufficient in phases 2 and 3 then notification by the Council in early 2018.

The RPC may refer matters back to the TANK Group for further advice and/or recommendations prior to recommending a final plan change to the Council for notification.

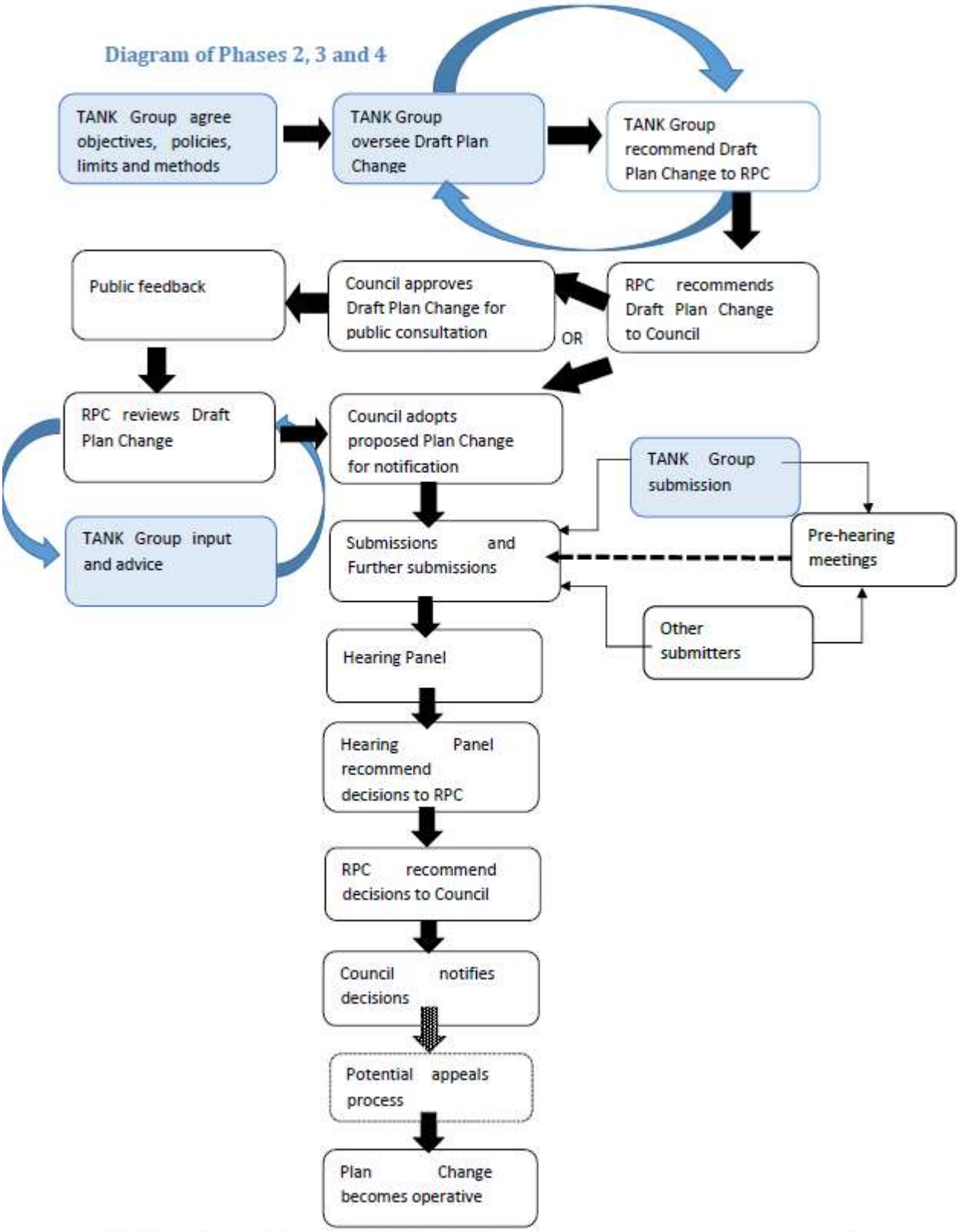
The TANK Group will be encouraged to make a submission on the proposed plan on behalf of the Group and will be assisted in this by Council staff if necessary.

This is to encourage on-going TANK commitment and involvement in any refinements to the plan change, including involvement in hearings and pre-hearing meetings and on-going commitment to plan implementation.

Hearing of submissions will be by the full RPC. (*editorial note: this proposal is amended by the recommendation in the report to RPC 20th April 2016 to a hearing panel consisting 3 councillor and 3 iwi members).* The RPC has been appointed by the Council to hear and make recommendations[2] on the submissions and further submissions on Proposed Plan Changes and make recommendations to the Council about the decisions to be made.

[2] The function of approving the Plan Changes under Clause 17 of Schedule 1 of the RMA was not delegated. That function remains with the Council

Diagram of Phases 2, 3 and 4



TANK Group Terms of Reference updated May 2018 pg. 8

11. Meeting schedule for TANK Group – Phases 2 & 3

The Tank Group will set the meeting schedule for meetings in Phase 2 and it will then become an attachment to this update (see attachment 3). Near the end of Phase 2, the meeting schedule for Phase 3 will be developed by HBRC's Project Team in consultation with TANK Group members. The schedule will be adapted as necessary to suit the availability of as many Group members as possible.

12. Contact details

Facilitator

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Appendices

Appendix 1: Study Area

Appendix 2: Planning framework

Resource management context

There are numerous documents that set the context and scope of this project – see Figure 1. Looking first at the left side of Figure 1, at a statutory level is the **Resource Management Act 1991** (RMA).

The RMA specifies the functions of regional councils with respect to resource management, states the purpose (to promote sustainable management, defined in RMA section 5) and sets some highlevel direction for how this is to be done (e.g. in RMA sections 6-8). (Refer to pp7-8 of slides from Meeting 1.)

The central government can issue national policy statements when it wants to provide direction on how it wants local authorities to carry out their functions. The **National Policy Statement on Freshwater Management (NPS)**, issued in 2014, directs regional councils to, among other things, set allocation limits and water quality targets for every water body, so that overall quality of fresh water in the region is maintained or improved.

HBRC developed the **Hawke's Bay Land & Water Management Strategy (LaWMS)** to provide a strategic overview to all its programmes regarding land and water management. LaWMS is a non-statutory document developed using a stakeholder reference group to set the higher level strategic direction for land and water management in Hawke's Bay. It contains a number of policies and possible actions that should be considered as part of the process for developing specific land and water management policies for the Greater Heretaunga and Ahuriri area. Some aspects of LaWMS are already being further developed through statutory processes such as Plan Change 5 to the Regional Policy and Plan Change 6 for the Tukituki catchment.

To implement the NPS, HBRC is also amending its **Regional Policy Statement (RPS)** to clarify its strategic intent for the region's main catchments (**RPS Change 5**). Although originally a separate document, the RPS now forms the strategic component of the Hawke's Bay **Regional Resource Management Plan (RRMP)**, which contains the more detailed provisions to set allocation limits and water quality targets, in some cases involving rules on land and water use. As at 31 August 2014, Change 5 remains subject to parts of two appeals. Appeals on 'wetland' related provisions are dependent on further ephemeral wetland mapping work. An Environment Court hearing is scheduled for early December regarding RPS objectives for groundwater quality.

Plan Changes to the RRMP are being developed for the seven major catchments in Hawke's Bay with the Tukituki, Mohaka and Greater Heretaunga and Ahuriri (TANK) catchments currently underway (lower green box in Figure 1).

Plan Change 6 for the Tukituki catchment was publicly released by a Board of Inquiry on 26 June 2014 as part of the Tukituki Catchment Proposal. As at August 2014, two appeals have been lodged on the Board of Inquiry's Final Report and Decisions and are due to be managed at the Wellington High Court.

The TANK process for the **Greater Heretaunga and Ahuriri zone** will similarly lead to a plan change to the RRMP and may also recommend other measures that are outside the RRMP structure.

Local government context

This brings us to the right side of Figure 1. The **Local Government Act 2002 (LGA)** describes the role of regional councils more generally; it "provides for local authorities to play a broad role in promoting the social, economic, environmental, and cultural well-being of their communities, taking a sustainable development approach". In giving effect to this mandate, councils have responsibilities under a number of statutes as well as the RMA.

Every three years, each local authority updates its **Long Term Plan (LTP)**, which states its priorities and indicative funding intentions for the next 10 years across all of its responsibilities. Thus, if the council anticipates a significant plan change, roading project or biodiversity initiative, these are signalled in the LTP along with the project cost and how it will be funded. The strategic direction in the LTP should align with that set in the RPS and in non-statutory documents such as the Land & Water Management Strategy. However, because only one of these can be changed at a time (*e.g.* the RPS cannot be amended via the LTP), it tends to be an iterative process of updating these documents over time to keep them aligned.

Funding and action plans are then confirmed annually through the **Annual Plan**, which specifies what projects will get done, the funding provided for each, and the rates that will be collected.

Summary

In summary, this process aims to provide the key content of a new chapter in the RRMP that specifies objectives, targets and limits for the TANK catchments. This must be consistent with the statutory direction in the RMA and NPS, and with the priorities set in the LTP. The Land & Water Management Strategy provides further strategic guidance regarding the broad objectives, and these will be given more focus through the RPS change underway. The priorities set in the RPS and in the Greater Heretaunga and Ahuriri plan change will need to be aligned. Any initiatives that require additional funding will need to be approved through the LTP and Annual Plan processes.

Appendix 3: Meeting Schedule for Phase 2-4

MEETING	Date
Meeting 19	5 April 2016
Meeting 20	24 May 2016
Meeting 21	28 June 2016
Meeting 22	9 August 2016
Meeting 23	20 September 2016
Meeting 24	4 November 2016
Meeting 25	13 December 2016
Meeting 26	9 February 2017
Meeting 27	22 March 2017
Meeting 28	27 April 2017
Meeting 29	14 June 2017
Meeting 30	27 July 2017
Meeting 31	17 August 2017
Meeting 32	7 September 2017
Meeting 33	10 October 2017
Meeting 34	18 October 2017
Meeting 35	22 November 2017
Meeting 36	30 January 2018
Meeting 37	22 February 2018
Meeting 38	22 March 2018
Meeting 39	19 April 2018
Meeting 40	31 May 2018
Meeting 41	27 June 2018
Meeting 42	26 July 2018
Meeting 43 (reserve)	30 August 2018

Note the text in Blue relates to Phases 3 and 4.

Addendum: TANK Group Operational Protocols

Attendance Protocol (from Meeting 12)

A TANK Group meeting is not a public forum. Any substitutes or visitors must be pre-approved.

Visitors or observers will not have speaking rights (unless this has been pre-arranged for a specific purpose). Visitors and observers must abide by the Group's meeting protocols and engagement etiquette.

Decision Making Protocol (from Meeting 18)

In terms of administrative decisions, those would typically be made by the Project Team or on the basis of a majority vote of those members present at the meeting. In terms of process-related matters, there is no single pre-defined approach but instead on a case-by-case basis, the Group should aim for consensus otherwise a majority vote would apply if striving for consensus was not going to be achievable or not straightforward. In such cases the independent facilitator will decide on the appropriate decision-making method.

Documents referred to in the TANK process

Note: These will be further refined for the Section 32 reporting

Document Title	Publisher / Author	Date
A national riparian restoration programme in New Zealand: Is it value for money?	Journal of Environmental Management	2017
A report of the known barriers to fish passage in Hawkes Bay	HBRC	March 2010
A review of current groundwater management in Hawkes Bay and recommendations for protection of groundwater ecosystems	NIWA	September 2009
Ahuriri Estuary Cultural Values	Mana Ahuriri	(undated) received by HBRC June 2018
Ahuriri Estuary: Contact Recreation and Food Gathering Review	HBRC	July 2014
Ahuriri Estuary: Environmental Assessment and Monitoring	HBRC	September 2006
Analysis of Karamu Catchment Flow Regimes and Water Supply Security Under a Range of Water Allocation Scenarios	HBRC	March 2008
Antifoulant and trace metal contamination of sediments from the Napier Inner Harbour	Jason Strong – Environmental Assessments & Monitoring Limited	July 2005
Assessment of Nitrogen and E.coli Groundwater Quality in the Hawkes Bay Region, 2008	HBRC	May 2010
Catchment Sensitivity, Nutrient Limits, Nutrient Spiralling & Forecasting Future Landuse Impacts in Hawkes Bay	NIWA	January 2009
Clive and Urban Stream Catchments: Surface Water Quality and Ecology State of the Environment Report	HBRC	2009
Clive River Sediment	HBRC – Gary Clode	August 2018
Collaborative Decision making for freshwater resources in the Greater Heretaunga and Ahuriri Region (TANK Group Report 1 Interim Agreements)	HBRC	December 2013
Cultural Values alignment with TANK Draft Plan report	Joella Brown	August 2018
Direct Economic Impact of the TANK Summary	Nimmo-Bell	June 2018
Economy-wide Impacts of Proposed Policy Options for the TANK Catchments	Market Economics	June 2018
Effects of Urban and Industrial Stormwater Discharges in the Hawke's Bay Region State of Knowledge report	Aquanet Consulting ltd	November 2011
Estuarine Ecology Programme – Environmental assessment of Ahuriri and Porangahau Estuaries	EAM Environmental Consultants	June 2009
Flow Naturalisation for Six Hawkes Bay River Catchments: Tutaekuri, Waipawa, Tukipo, Tukituki, Maraetotara and Porangahau	MWH	June 2012
Greater Heretaunga and Ahuriri (TANK) Collaborative Stakeholder Group Terms of Reference	HBRC	As updated Oct 2014, April 2016 and May 2018
Groundwater Quantity – State of Environment 5 yearly report 2003-2008	HBRC	February 2010
Hawke's Bay Land and Water Management Strategy	HBRC	May 2014

Document Title	Publisher / Author	Date
Hawke's Bay Regional Council Te Tua Storgae Scheme	Williamson Water Advisory	February 2018
Hawke's Bay Regional Resource Management Plan TANK Plan Change Document - Peer Review Findings	Peter Constantine	July 2018
Heretaunga Plains Aquifers: Groundwater Dynamics, Source and Hydrochemical Processes as Inferred from Age, Chemistry, and Stable Isotope Tracer Data	GNS	April 2018
Heretaunga Plains Groundwater Study – Executive Summary	HBRC	1997
Heretaunga Plains Groundwater Study: Volume 1 findings	HBRC	1997
Irrigation in Hawkes Bay: Application of the River Values Assessment System (RiVAS)	Simon Harris Consulting	July 2012
Karamu Characterisation report – Supporting Information for Water Allocation	HBRC	November 2013
Lower Ngaruroro River Instream Flow Assessment	HBRC	March 2011
Maraekakaho Stream Minimum Flow – Scientific Evidence	HBRC	July 2010
Modelling Water Restrictions and Nutrient Losses for Horticulture in the TANK Catchment – An Economic Analysis	AgFirst	May 2018
My Wells Gone Dry – A guide to well water problems and maintenance	HBRC	
Napier Inner Harbour: Resurvey of antifoulant and trace metal contamination of sediments	EAM Environmental Consultants	June 2008
Native birdlife in Hawkes Bay: Application of the River Values Assessment System (RiVAS and RiVAS+)	K.F.D Hughey, Fiona Cameron, John Cheyne, Rod Dickson, Adam Forbes, Keiko Hashiba, Hans Rook, Tim Sharp, Brent Stephenson, Bryan Welch	July 2012
Natural Character in Hawkes Bay: Application of the River Values Assessment System (RiVAS and RiVAS+)	Kay Booth (Lindis Consulting)	July 2012
Nearshore Coastal Water Quality in Hawkes Bay	HBRC	June 2006
Ngaruroro River Flow Naturalisation	MWH	15 March 2010
Ngaruroro River High Flow Allocation June to November Period	MWH	25 May 2010
Ngaruroro River RHYHABSIM modelling update	HBRC	June 2008
Ngaruroro Values and Attributes Report	Kate McArthur, Morry Black, Marei Apatu, Ngatai Huata, Joella Brown, Ngaio Tiuka	October 2016
Nitrate in Groundwater in Hawkes Bay Region	HBRC	April 2008
Paritua/Karewarewa Stream – Hydrology	HBRC	October 2007
Part 2 of the TANK catchment Economic, Social & Ecological Impact Assessment: Water management & Land Management Policy Options	AgFirst	March 2018
Pseudo-Transient groundwater-stream interaction model for determination of the effect of groundwater abstraction on spring-fed stream flow in the Poukawa basin, Hawkes Bay	GNS Science	October 2011
Recommendations to TANK for Rule Changes to Provide for Source Protection Zones in the TANK catchments	Joint Working Group (Drinking Water)	July 2018

Document Title	Publisher / Author	Date
Recreational Uses of Hawkes Bay Rivers - results of recreational usage survey 2010	HBRC	November 2010
Recreational Water Quality in Hawkes Bay – Review of the 2010-2011 Recreational Water Quality Monitoring Programme	HBRC	June 2011
Salmonid Angling in Hawkes Bay: Application of the River Values Assessment System (RiVAS)	Kay Booth (Lindis Consulting), Larissa Coubrough, Tom Winlove	July 2012
Social and Cultural Assessment TANK Catchments (PowerPoint presentation)	iPansophy – Dr Cole	June 2018
Source Water Protection – Presentation to TANK meeting on behalf of Havelock Joint Working Group on Drinking Water Safety (PowerPoint)	Good Earth Matters	31 May 2018
Stream Ecological Valuation: Ruahapia and Raupare Streams	MWH	March 2011
Stream Ecological Valuation: Upper Karamu Waterways	MWH	June 2010
Stream Ecological Valuations – Selected sites within the Napier and Heretaunga Catchments	HBRC	May 2010
Swimming in Hawkes Bay: Application of the River Values Assessment System (RiVAS and RiVAS+)	Kay Booth, Anna Madarasz-Smith, Jenny Mauger, Aki Paipper, Erin Petuha, Tim Sharp	July 2012
TANK Direct Economic Impacts FINAL	Nimmo-Bell	June 2018
TANK Economic Assessments Working Group - Brief	HBRC	March 2017
TANK Engagement Working Group (EWG) Terms of Reference	HBRC	August 2016
TANK Masterplan – for the Greater Heretaunga and Ahuriri (TANK) Plan Change	HBRC	April 2016
TANK Plan Change: Barriers and risks to the adoption of proposed mechanisms to coordinate management action	Deliberate – Justin Connolly	June 2018
TANK project: social and cultural impact assessment. Part 1/3 - Feedback from Community Reference Group meetings and interviews	iPansophy – Dr Anthony Cole	May 2018
TANK Values – Te Ao Māori (diagram)		2017
TANK Wider Economic Impacts (Power Point Presentation)	Market Economics	June 2018
The estuaries of the TANK catchments: Ahuriri and Waitangi Estuaries, Values, State and Trends	HBRC	May 2016
Tutaekuri Awa – Values, Objectives and Management Report	Ngā Hapu o Tūtaekurī	2018
Twyford Consent Area Technical report – Groundwater Impact Assessment	HBRC	October 2009
Waitangi Estuary Ecological Monitoring 2004	HBRC	February 2005
Waitangi Regional Park – Waitangi Estuary Enhancement Vision Document, Weaving Histories	Boffa Miskell	
Ways to Manage Soil Loss in the Tank Catchment	HBRC	February 2017
Wetland Monitoring Review – A review of Hawkes Bay Regional Councils Wetland Monitoring	HBRC	October 2008

Document Title	Publisher / Author	Date
Whitewater Kayaking in Hawkes Bay: Application of the River Values Assessment System (RiVAS)	Kay Booth, Sean Bellamy, Andy England, Warren Hales, Bernie Kelly, Chris Reed, Graham Sevicke-Jones	July 2012

Potential Outline for TANK Section 32 Report

1. **Introduction**
   - i. Purpose of Report
   - ii. Intended purpose of TANK process and Plan Change
   - iii. Geographic extent of TANK catchments

2. **Statutory Requirements of Section 32 Evaluation**

3. **Statutory Basis for TANK Plan Change**
   - i. Part 2 RMA (sections 5 – 8)
   - ii. Part 4 RMA (section 30 Regional Council Functions)
   - iii. Part 5 RMA (sections 63 – 70, Regional Plans)
   - iv. National Policy Statements
     - a. National Policy Statement for Freshwater Management 2014
     - b. National Policy Statemen for Renewable Electricity Generation
     - c. New Zealand Coastal Policy Statement
   - v. National Environmental Standards
     - a. National Environmental Standards for Sources of Human Drinking Water 2007
     - b. National Environmental Standards for Plantation Forestry 2017
   - vi. Relevant Planning Documents Recognised by an Iwi Authority
   - vii. Regional Policy Statement
     - a. RPS Change 5
     - b. Remainder of RPS

4. **Community Engagement Process**
   - i. TANK
     - a. Composition
     - b. Terms of Reference
     - c. Phase 1 – Interim Agreements
     - d. Phase 2 – Agreement on objectives, attributes and desired attribute states for management of water bodies
     - e. Phase 3 – Input to plan change drafting
     - f. Phase 4 – Involvement post Council adoption
   - ii. Mana Whenua engagement generally
   - iii. Iwi Authority engagement – Section 32(4A)
     - a. Summary of all advice concerning the proposal from iwi authorities under the relevant provisions of Schedule 1; and
     - b. Summary of the response to the advice, including any provisions of the proposal that are intended to give effect to the advice.

5. **Background to Plan Change**
   - i. HB Land & Water Management Strategy
   - ii. Land and Water Resource of TANK Catchments
     - a. Land Resources
     - b. Surface Water Resources
     - c. Groundwater Resources

iii. Values and Uses of the TANK Catchments
    a. Māori Cultural
    b. Social
    c. Economic
    d. Environmental
iv. Summary of Technical Reports produced to support the plan change

6. Plan Change Matters to be Addressed

i. Freshwater Objectives of the TANK Catchments
ii. Water Management Zones
iii. Water Quality
    a. Current approach in RRMP
    b. Approach in TANK Plan Change
    c. General Metrics
    d. Periphyton (algae and slime) & Macrophytes
    e. Sediment & Phosphorus Management
    f. Nitrogen Management
    g. Fish & Invertebrates
    h. Ground Water Quality
    i. Drinking Water Quality
iv. Water Allocation
    a. Current approach in RRMP
    b. Approach in TANK Plan Change
    c. Minimum Flow Limits
    d. Water Allocation Limits
    e. High Flow Allocation

7. Evaluation Under Section 32

i. Are the objectives the most appropriate way to achieve the purpose of the Act?
    a. Overview
    b. Analysis of each objective and how it achieves the purpose of the Act
ii. Are the plan change provisions the most appropriate way to achieve the objectives?
    a. Overview – setting out the different provisions to be tested
    b. Assessment of each set of provisions by:
        1) Setting out reasonably practicable options for achieving the objective
        2) Assessing the efficiency and effectiveness of the potential provisions in achieving the objectives including the benefits and costs of the environmental, economic, social and cultural effects that are anticipated. – Including with benefits and costs quantified
            a. opportunities for economic growth anticipated to be provided or reduced; and
            b. opportunities for employment anticipated to be provided or reduced
        3) Assess the risks of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions

8. Summary and Conclusions