

Proposed Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments

~~Notified version (October 2016)~~

Final “Tracked Changes” Version

**Black tracked changes are insertions or deletions
to the notified version of PC1**

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Proposed Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments

From the Healthy Rivers Wai Ora committee co-chairs-

Tuia te rangi e tū nei

Tuia te papa e takoto nei

Tuia te muka tangata e whiria nei i te mata o te whenua

Kīngi Tuheitia – te mauri o te motu

Tuia ngā manako o ngā iwi kia whakaorangia, kia tiakina hoki te mauri o ngā wai

Paimārire

We are honoured to introduce the Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments (Proposed)-

This document represents the start of the regional community's journey in restoring and protecting the health and wellbeing of the Waikato and Waipā rivers for the benefit of current and future generations, as set out in the Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato-

The proposed plan change sets out an 80 year timeframe for the Waikato and Waipā rivers and their tributaries to be swimmable and safe for food collection along their entire lengths, and in doing so, achieving the requirements of the Vision and Strategy/Te Ture Whaimana, the primary direction setting document for the rivers. In achieving this outcome, it sets a higher bar than the National Policy Statement for Freshwater Management 2014's requirement of wadeable water bodies-

The proposed plan change has been developed under a unique set of circumstances-

What sets this proposed plan change apart is that six organisations — Maniapoto Māori Trust Board, Raukawa Charitable Trust, Tūwharetoa Māori Trust Board, Te Arawa River Iwi Trust and Waikato Raupatu River Trust representing Waikato and Waipā River iwi — and Waikato Regional Council partnered on the project to develop this proposed plan change, Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai. The partnership gives effect to the co-management arrangements between the five River iwi and Waikato Regional Council for the Waikato and Waipā Rivers. The guardians of the Vision and Strategy/Te Ture Whaimana, the Waikato River Authority, have also been closely involved-

The policies outlined in the following pages have been principally developed by a group of exceptional individuals as part of the Healthy Rivers/Wai Ora project. Over two and a half years, the 24-strong Collaborative Stakeholder Group, led by an independent chair and assisted by a very capable facilitator, stepped up to represent stakeholders — a diverse range of sectors and the community — in developing the proposed plan change. To ensure they had the right information to make justifiable and achievable decisions, they received technical information, including Mātauranga Māori (Māori knowledge) from a highly qualified Technical Leaders Group. The Collaborative Stakeholder Group's task has not been easy, and we would like to express our gratitude for their commitment to the process and for what they've collectively achieved-

As co-chairs of the Healthy Rivers Wai Ora committee, a joint decision-making body of River iwi governors and regional councillors, we have been privileged to attend many of the Collaborative Stakeholder Group's workshops. It has been inspiring to witness the diverse range of interests represented in the room working together for solutions to restore and protect our precious fresh water, and putting in place a long term plan for bringing the Vision and Strategy/Te Ture Whaimana to life-

Every person who has come forward and shared their ideas with the Collaborative Stakeholder Group deserves acknowledgement for contributing to the solutions for the rivers. Whether a member of the public or part of an organisation, thank you for being part of the process that has produced this document-

Councillor Alan Livingston _____ Kataraina Hodge

Co-chair, Healthy Rivers Wai Ora Committee _____ Co-chair, Healthy Rivers Wai Ora Committee

Waikato Regional Council _____ **Raukawa Charitable Trust**

From the Waikato Regional Council chair

Waikato Regional Council is proud to have been one of the partners in the Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai project that developed this proposed plan change.

This document is important, not just for the people of the Waikato region but for all of New Zealand, given the Waikato River's national importance and its contribution to our country's cultural, social and environmental wellbeing. The plan proposes to reduce key contaminants entering water bodies in the Waipā and Waikato river catchments, which cover 1.1 million hectares.

For Waikato Regional Council, the collaborative approach taken to develop this plan change marks a new way of producing this type of policy.

Addressing water quality issues is complex. Progress can only be made through seeking sensible, practical solutions and working with others.

Everyone in the Waikato and Waipā river catchments holds a stake in the rivers, as do many beyond. The rivers' stakeholders are diverse, as reflected in the composition of the Collaborative Stakeholder Group (CSG) instrumental in developing this plan change. People and sectors hold a wide range of values for the rivers. The CSG travelled far and wide in the catchments to hear different perspectives and to experience and understand the diversity.

Initially there was little agreement on causes of the problem, no direct cause and effect relationship and, in addition, technically complex issues. The Vision and Strategy/Te Ture Whaimana also required the group to develop a plan for the rivers to be swimmable and safe for food collection. To address this an impartial group of specialists was specially formed to provide the CSG and others involved with technical information. As a result, this plan change is based on scientific evidence and also incorporates Mātauranga Māori, or traditional and contemporary Māori knowledge.

On behalf of Waikato Regional Council I thank the Collaborative Stakeholder Group, the Technical Leaders Group and the wider community for their involvement and commitment to the collaborative process and the desired outcomes for our waterways. The conversations do not stop here. Waikato Regional Council staff are available at any stage to address your questions and information needs. We want to get this plan right so I encourage you to submit your feedback. Water quality is a shared problem and we need shared solutions.

Chairperson Paula Southgate

Waikato Regional Council

Nā ngā hoa kaihautū o te komiti o Wai Ora

Tuia te rangi e tū nei

Tuia te papa e takoto nei

Tuia te muka tangata e whiria nei i te mata o te whenua

Kīngi Tuheitia – te mauri o te motu

Tuia ngā manako o ngā iwi kia whakaorangia, kia tiakina hoki te mauri o ngā wai

Paimārire

Nō māua te hōnore ki te tāpae i te Panonitanga 1 i te Mahere ā Rohe a Waikato – ngā Riu o ngā Awa o Waikato me Waipā (e marohitia nei).

Ko tā tēnei pukapuka, he kōkiri i te haerenga o te hāpori ā rohe ki te whakaora, ki te tiaki hoki i te ora me te mauri o ngā awa o Waikato me Waipā, hei painga mō ngā whakatupuranga o nāianei me ngā whakatupuranga o anamata, e takoto ana i roto i Te Ture Whaimana o Te Awa o Waikato.

E takoto ana i te panonitanga ā mahere e marohitia nei, tētehi pae wā e 80 tau te roa, kia ora ngā wai o Waikato me Waipā me ngā kautawa hei kauranga, hei wāhi kōhi kai, i ngā wāhi katoa o aua awa, mai i ngā mātāpuna ki ngā pūaha, ā, mā reira e tutuki ai ngā herenga o Te Ture Whaimana, o te pukapuka matua e whakatau ana i te ahunga whakamuatanga mō aua awa. Ki te tutuki taua putanga, ka teitei ake te paerewa i tērā o te herenga o te Tauāki Kaupapa Here ā Motu mō te Whakahaeretanga o te Wai Māori, o te tau 2014, kia wātea ngā wai hei kautūtanga.

Kua whakaritea te panonitanga ā mahere e marohitia nei i runga i ētehi tūāhuatanga ahureinga.

Ko te mea e motuhake ai tēnei panonitanga ā mahere e marohitia nei, e ono ngā whakahaere i mahi ngātahi i tēnei kaupapa – arā, ko te Poari o Maniapoto rātou ko te Poari Manaaki o Raukawa, ko te Poari Māori o Tūwharetoa, ko te Tarahati o ngā Iwi o ngā Awa o Te Arawa, ko te Tarahati o te Awa o Waikato Raupatu hei māngai mō ngā iwi o ngā awa o Waikato me Waipā – me te Kaunihera ā Rohe o Waikato, ki te whakarite i tēnei panonitanga ā mahere, i a Wai Ora: He Rautaki Whakapaipai. Mā tēnei mahi ngātahitanga e whakatinana ngā whakaritenga mō te whakahaere ngātahitanga i waenga i ngā iwi e rima o te awa me te Kaunihera ā Rohe o Waikato mō ngā awa o Waikato me Waipā. Kua āta whai wāhi mai hoki ngā kaitiaki o te Mana Whakahaere o te Awa o Waikato, o Te Ture Whaimana.

Kua whakaritea te nuinga o ngā kaupapa here e takoto ana i ngā whārangi e whai ake nei e tētehi rōpū tuatangata i roto i te kaupapa o Wai Ora. I roto i ngā tau e rua me te hāwhē, i tū ake te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga, i raro i te ārahitanga o tētehi kaihautū motuhake, i āwhinatia ai hoki e tētehi kaiwhakahaere tino mātau, hei māngai mō ngā hunga whai pānga – mō ngā momo rāngai rerekē me te hāpori, ki te whakarite i te panonitanga ā mahere e marohitia nei. E tika ai ngā pārongo i a rātou, e whaitake ai, e tutuki ai hoki ā rātou whakatau, i whiwhi pārongo whāiti rātou, whērā i te Mātauranga Māori i ahu mai i tētehi Rōpū Kaiārahi Whāiti. Kāore i māmā noa iho te mahi a te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga, nā konei e rere nei ā māua whakamānawa ki tō rātou ū ki te tukanga, ki ngā mahi hoki i whakatutukihia petapetahia e rātou.

I ō māua tūnga hei hoa kaihautū mō te komiti o Wai Ora, mō te rangapū whakatau tukutahi o ngā kaihautū o ngā iwi o ngā awa me ngā kaikaunihera ā rohe, māringanui ana māua i te taenga ki ngā hui maha a te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga. Kua whakaawehia māua i te rongotanga i ngā momo tūmanako rerekē e whakakanohihia ana i te rūma, e te hunga e mahi ngātahi ana ki te kimi rongoā hei whakaora, hei tiaki hoki i ō tātou wai Māori matahiapo, e whakarite ana hoki i tētehi mahere tauroa e puta ai Te Ture Whaimana ki te ao mārama.

Me mihi ka tika ia tangata i haere mai ki te tuku whakaaro ki te aroaro o te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga, mō rātou i whakatakoto rongoā mō ngā awa. Ahakoa nō te marea, ahakoa nō tētehi whakahaere rānei, tēnā koutou i whai wāhi mai ki te tukanga i puta ai tēnei pukapuka.

Councillor Alan Livingston _____ Kataraina Hodge

Co-chair, Healthy Rivers Wai Ora Committee _____ Co-chair, Healthy Rivers Wai Ora Committee

Waikato Regional Council _____ **Raukawa Charitable Trust**

Nā te kaihautū o te Kaunihera ā Rohe o Waikato

E ngākau whakapuke nei te Kaunihera ā Rohe o Waikato kia noho hei hoa mahi i te kaupapa o Wai Ora: He Rautaki Whakapaipai, i whakarite ai i tēnei panonitanga ā mahere e marohitia nei.

He whakahirahira tēnei pukapuka, kua noa iho ki ngā tāngata o te rohe o Waikato, engari ki ngā tāngata katoa o Aotearoa, inā hoki, e hiranga ana te awa o Waikato ki te motu, e whai wāhi ana hoki te awa ki te oranga ā ahurea, ā pāpori, ā taiao hoki o tō tātou whenua. E marohi ana te mahere kia whakaitihia te urunga o ētehi matū tāhawahawa matua ki ngā wai i roto i ngā riu o ngā awa o Waipā me Waikato, 1.1 miriona heketea nei te whānui.

Ki te Kaunihera ā Rohe o Waikato, e tohu ana te kaupapa mahi ngātahi i whāia ai ki te whakarite i tēnei panonitanga ā mahere i tētehi huarahi hou hei whakaputa i tēnei momo kaupapa here.

He uaua te whakatau i ngā take e pā ana ki te kounga o te wai. Mā te rapu rongoā whai take, e taea ana te whakatutuki, mā te mahi ngātahi hoki me ētehi atu, mā reira rawa e neke whakamua ai te kaupapa.

He pānga tō ngā tāngata katoa kei ngā riu o ngā awa o Waikato me Waipā ki ngā awa, tae atu hoki ki te tokomaha kei tua atu. He rerekē ngā hunga whai pānga ki te awa, e whakaatahia ana i te tōpū o te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga nāna tonu tēnei panonitanga ā mahere i whakarite. He whānui ngā momo uara o ngā tāngata me ngā rāngai e pā ana ki ngā awa. I puta te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga ki ngā tōpito o ngā riu ki te whakarongo ki ngā whakaaro rerekē, ki te kite ā kanohi i ngā rerekētanga, ki te whai māramatanga hoki ki ngā rerekētanga.

I te tīmatanga, kāore i nui ngā whakaaetanga e pā ana ki ngā pūtake o te raruraru, karekau he hononga hāngai e kitea ai te pūtake me te pānga, ā, hei āpiti atu, he maha ngā take whāiti i uaua. I herea hoki te rōpū e Te Ture Whaimana kia whakaritea he mahere e kauria ai ngā awa, e ora ai hoki te wai hei wāhi kōhi kai. Hei whakatau i tēnei, i āta whakatūria tētehi rōpū mātanga e noho motuhake ana, hei tuku mai i ngā pārongo whāiti ki te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga me ētehi atu i whai wāhi mai. Nā konā, ka noho ngā taunakitanga ā pūtaiao hei pūtake mō tēnei mahere, ka whai wāhi mai hoki te Mātauranga Māori.

Hei māngai mō te Kaunihera ā Rohe o Waikato, tēnei au e mihi nei ki te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga, ki te Rōpū Kaiārahi Whāiti, ki te hapori whānui hoki, mō rātou i whai wāhi mai, mō rātou hoki i ū ki te tukanga mahi ngātahi, ki ngā hua hoki mō tō tātou arawai e manakohia ana. Kāore ngā kōrero e mutu i konei. E wātea ana ngā kaimahi o te Kaunihera ā Rohe o Waikato i ngā wā katoa, ki te whai kia ea ā koutou pātai me tō koutou hiahia ki ngā pārongo. E hiahia ana mātou kia tika tēnei mahere, nō reira e akiaki nei au i a koutou kia tukuna mai tō koutou whakaaro. Ka pā te raruraru o te kounga o te wai ki a tātou katoa, ā, me puta ngā rongoā i a tātou katoa.

Chairperson Paula Southgate

Waikato Regional Council

Explanatory Statement/He Tauākī Whakamārama

~~(This statement does not form part of the Plan Change and is for explanatory purposes only).~~

~~Proposed Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments to the Waikato Regional Plan pursuant to Schedule 1 of the Resource Management Act 1991.~~

~~This document is a change to the Operative Waikato Regional Plan (WRP), to restore and protect water quality in the Waikato and Waipā Rivers by managing discharges of nitrogen, phosphorus, sediment and microbial pathogens to land in the catchment, where it may enter surface water or ground water and subsequently enter the rivers, or directly into a water body.~~

~~This plan change document is divided into five parts:~~

~~Part A inserts a new Chapter 3.11 as text to be added after Chapter 3.10 but before Module 4.~~

~~Part B inserts a new condition to section 5.1.5 as text to be added after 5.1.5 (p) iii. but before the Advisory Note.~~

~~Part C inserts new items into the Glossary of Terms in the Regional Plan, in alphabetical order.~~

~~Part D inserts amendments to existing text of the Regional Plan. Text to be deleted are shown as strikethrough and additional text to be added shown as underline.~~

~~Terms in the Objectives, Policies and Implementation methods of Chapter 3.11 which are bolded can be found in the Glossary. Note also, that as a convention of the Waikato Regional Plan:~~

- ~~▪ Terms marked * are defined by the Resource Management Act 1991~~
- ~~▪ Terms marked ^ are defined by the National Policy Statement for Freshwater Management 2014.~~
- ~~▪ Terms marked ~ are defined by the Waikato Regional Policy Statement 2016.~~
- ~~▪ Unless a direct source is specified in a footnote, all other terms have been developed specifically for the purpose of this plan change.~~

~~The Rules in Part A – Rules 3.11.5.1 to 3.11.5.7 of Chapter 3.11 have immediate legal effect from the date of notification in accordance with section 86B(3)(a) of the Resource Management Act 1991. The new condition (q) to section 5.1.5 in Part B, and the consequential amendments to the text in Part D have immediate legal effect from the date of notification.~~

PART A

Waikato and Waipā River Catchments/Ngā Riu o ngā Awa o Waikato me Waipā

Area covered by Chapter 3.11/Ngā Riu o ngā Awa o Waikato me Waipā

This Chapter 3.11 applies to the Waikato and Waipā¹ River catchments. The map shown in Map 3.11-1 shows the general catchment boundary. This Chapter is additional to all other parts of the Waikato Regional² Plan. Where there are any inconsistencies, Chapter 3.11 prevails.

Map 3.11-1 shows the general catchment boundary and includes the boundaries of each Freshwater Management Unit[^] (FMU): The FMUs are:

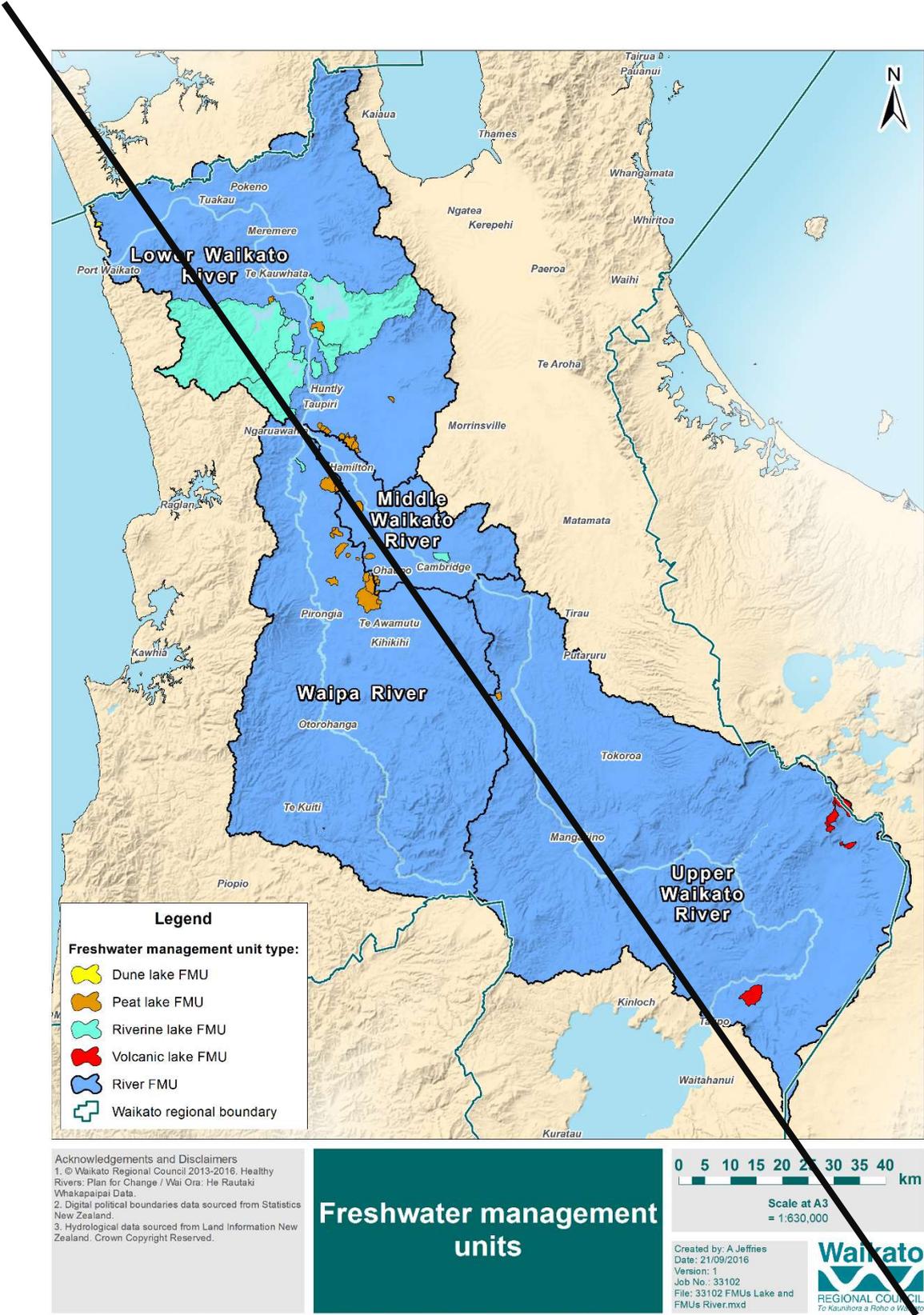
- Upper Waikato River
- Middle Waikato River
- Lower Waikato River
- Waipā River
- Peat Lakes
- Riverine Lakes
- Dune Lakes
- Volcanic Lakes

FMUs are required by central government's National Policy Statement for Freshwater Management 2014. FMUs enable monitoring of progress towards meeting targets[^] and limits[^].

The Plan maps of the Waikato and Waipā River catchments are available electronically or for viewing at Waikato Regional Council offices on request.

¹ Macrons have been added to placenames where appropriate, without tracking showing

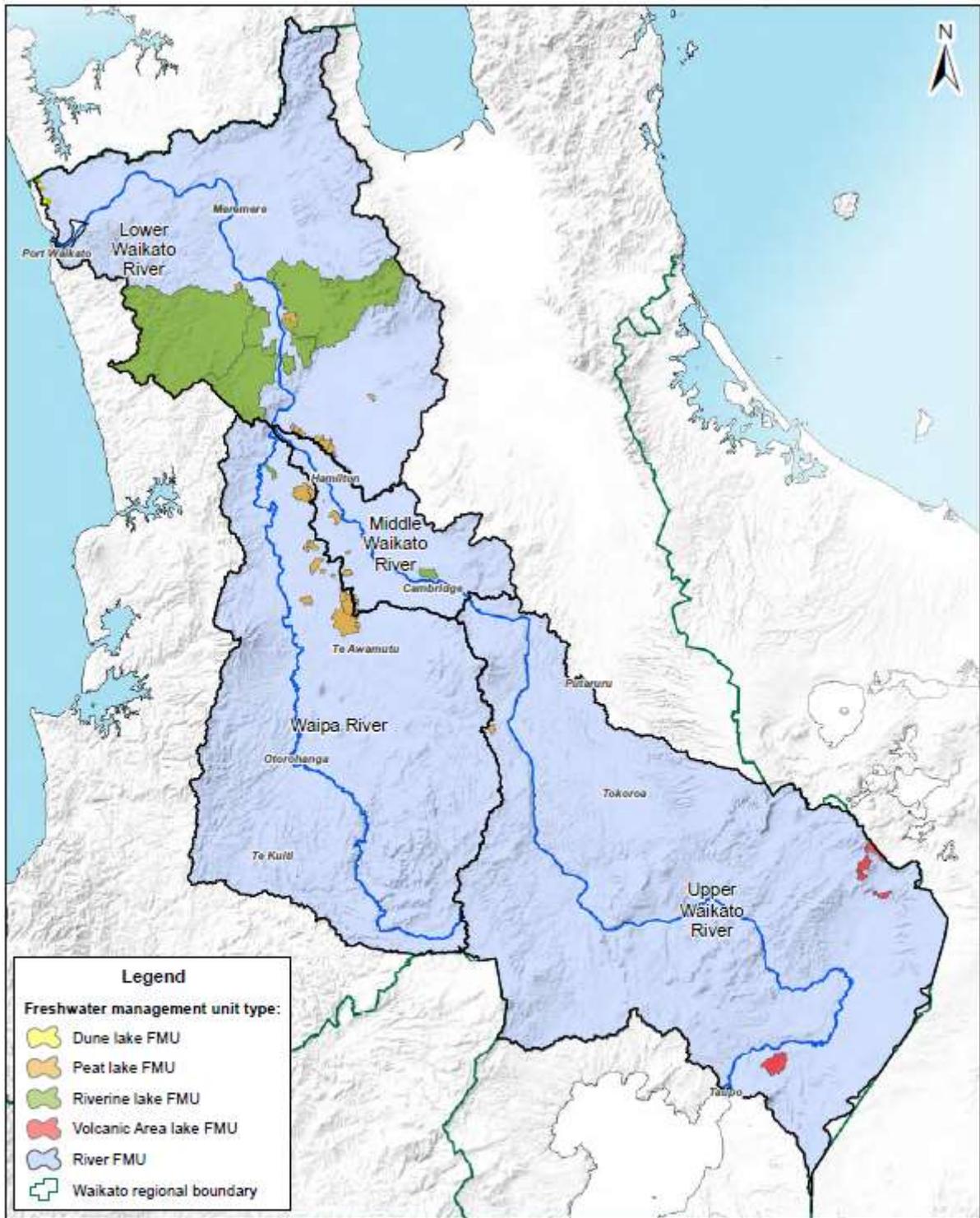
² Waikato Regional Council PC1-2976



Acknowledgements and Disclaimers
 1. © Waikato Regional Council 2013-2016. Healthy Rivers: Plan for Change / Wai Ora: He Rautaki Whakapūāwai Data.
 2. Digital political boundaries data sourced from Statistics New Zealand.
 3. Hydrological data sourced from Land Information New Zealand. Crown Copyright Reserved.

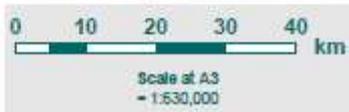
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Map 3.11-1: Map of the Waikato and Waipā River catchments, showing Freshwater Management Units



Acknowledgements and Disclaimers
 1. © Waikato Regional Council 2013-2015, Healthy Rivers: Plan for Change / Wai Ora: He Raukaki Whakapaipoi Data.
 2. Digital political boundaries data sourced from Statistics New Zealand.
 3. Hydrological data sourced from Land Information New Zealand. Crown Copyright Reserved.

Freshwater management units



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Map 3.11-1: Map of the Waikato and Waipā River catchments, showing Freshwater Management Units

Background and explanation

Co-management of the Waikato and Waipā Rivers

There are three River Acts that establish co-governance arrangements for the Waikato and Waipā Rivers and catchment. These are Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, Ngāti Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010 and Nga Wai o Maniapoto (Waipā River) Act 2012.

The iwi partners in the development of Chapter 3.11 are Maniapoto, Raukawa, Ngāti Tuwharetoa, Te Arawa River Iwi and Waikato-Tainui. The processes for preparing, reviewing, changing or varying the regional plan, in terms of River Iwi involvement in the process, is set out in the legislation. This includes a requirement for Council to establish a Joint Working Party with each of the River Iwi, the purposes of which include making joint recommendations to the Council regarding the plan change.

The three River Acts established the Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato (~~Vision and Strategy~~) as the primary direction setting document for the Waikato and Waipā Rivers. Te Ture Whaimana o Te Awa o Waikato The Vision and Strategy³ prevails over any inconsistencies in a national policy statement or New Zealand coastal policy statement, and is deemed to be part of the Waikato Regional Policy Statement.

Te Ture Whaimana o Te Awa o Waikato The Vision and Strategy states that the Waikato and Waipā Rivers are degraded and require, amongst other things, restoration and protection. One objective⁴ has been given particular focus for this chapter: The restoration of water quality within the Waikato River so that it is safe for people to swim in and take food from over its entire length. Te Ture Whaimana o Te Awa o Waikato The Vision and Strategy is being given effect to in Chapter 3.11 by:

- Reducing nitrogen, phosphorus, sediment and microbial pathogen losses from land
- Ongoing management of diffuse and point source discharges of nitrogen, phosphorus, sediment and microbial pathogens
- Giving people and communities time to adapt to the requirements of Chapter 3.11 and supporting actions to achieve short-term objectives while being clear that further reductions in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens ~~losses from land~~ will be required in subsequent regional plans
- Ensuring that Waikato Regional Council continues to facilitate ongoing research, monitoring and tracking of changes on the land and in the water to provide for the application of Mātauranga Māori and latest scientific methods, as they become available
- Preparing for future requirements on what can be undertaken on the land, ~~with limits~~ ensuring that the management of land use and activities is closely aligned with the biophysical capabilities of the land, the spatial location, and the likely effects of discharges on the lakes, rivers and wetlands in the catchment⁵.

Collaborative approach

The co-governance partners agreed to adopt a collaborative approach to investigate and develop fresh water management approaches that would be implemented in the Waikato and Waipā River ~~c~~Catchments.

A key feature of the collaborative approach was the Collaborative Stakeholder Group (CSG), which represented stakeholders and the wider community in Healthy Rivers: Plan for Change/Wai Ora: He Rautaki Whakapaipai. The CSG was the central channel for stakeholder and broader community collaboration in the project. It intensively reviewed and deliberated on technical material from a group of external technical experts from a range of disciplines. For Proposed Plan Change 1, ~~t~~The CSG also sought input from their sectors and from the community, and ultimately proposed the contents of Chapter 3.11 to decision makers.

Consultation

Schedule 1 of the RMA includes requirements to consult with certain parties, including iwi authorities, during the preparation of the Variation. Consultation has taken place with affected parties including the relevant iwi authorities and the issues raised during consultation have been taken into account by Waikato Regional Council in the development of

³ Per River Iwi closing statement.

⁴ *Te Ture Whaimana o te Awa o Waikato, Objective K*

⁵ FANZ PC1-9789

Variation 1. Consultation has led to a Variation to Proposed Plan Change 1.

Water quality and National Policy Statement for Freshwater Management

The National Policy Statement for Freshwater Management 2014 (NPS FM) requires regional councils to formulate freshwater objectives[^] and set limits[^] or targets[^] (a target is a limit to be achieved within a specified timeframe). Regional councils must ensure over-allocation[^] of the water resource is avoided, or addressed where that has already occurred.

Current water quality monitoring results show that while there is variability across the Waikato and Waipā River catchments, there are adverse effects on water bodies associated with discharges of nitrogen, phosphorus, sediment and microbial pathogens. The CSG concluded that from a water quality point of view, over-allocation[^] has occurred. Water bodies in the Waikato and Waipā River catchments are not able to assimilate further discharges of nitrogen, phosphorus, sediment and microbial pathogens, without adversely affecting community-held values. Achieving the numeric, long-term freshwater objectives[^] in Chapter 3.11 will require reductions in diffuse and point source contaminants.

The NPS FM directs the Waikato Regional Council to establish freshwater objectives[^] that give effect to the objectives of the NPS FM and describe the state that Waikato regional communities want for fresh water in the future.

The NPS FM process followed in developing Chapter 3.11, included identifying FMUs and the values for each, and then choosing relevant water quality attributes[^] and attribute states[^] that can be monitored over time. Freshwater objectives[^] and limits[^] or targets[^] set out what is required to achieve the attribute states[^]. Under the NPS FM, a limit[^] is the maximum amount of resource use available, which allows a freshwater objective[^] to be met.

The CSG identified resource use that affects the achievement of the freshwater objectives[^] and long-term desired water quality, and for achieving Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy. Chapter 3.11 sets out provisions policies and methods that restrict what can be done on the land and discharged to land or water.

Full achievement of Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy will be intergenerational

The CSG has chosen an 80-year timeframe to achieve the water quality objectives of the Vision and Strategy. The timeframe is intergenerational and more aspirational than the national bottom lines set out in the NPS FM because it seeks to meet the higher standards of being safe to swim in and take food from over the entire length of the Waikato and Waipā Rivers and catchment. Based on the information currently available, the CSG has concluded full achievement of the Vision and Strategy by 2096 is likely to be costly and difficult. The 80-year timeframe recognises the ‘innovation gap’ that means full achievement of water quality requires technologies or practices that are not yet available or economically feasible. In addition, the current understanding is that achieving water quality restoration requires a considerable amount of land to be changed from land uses with moderate and high intensity of discharges to land use with lower discharges (e.g. through reforestation).

Because of the extent of change required to restore and protect water quality in the 80-year timeframe, the CSG has adopted a staged approach. This approach breaks the required improvements into a number of steps, the first of which is to put in place and implement the range of actions in a 10 year period that will be required to achieve 10 percent of the required change between current water quality and the long term water quality in 2096. The staged approach recognises that immediate large scale land use change may be socially disruptive, and there is considerable effort and cost for resource users, industry and Waikato Regional Council to set up the change process in the first stage. New implementation processes, expertise and engagement are needed to support the first stage. The staged approach also allows time for the innovation in technology and practices that will need to be developed to meet the targets[^] and limits[^] in subsequent regional plans ~~to be developed~~.

Because of the extent of change required to meet the 80-year limits[^], achieving even the first step towards the long-term freshwater objectives in this Plan is an ambitious target. This means the effects of actions and changes on the land may not be seen as water quality improvements in the water bodies in the short term. This is partly due to the time required for the concentration of contaminants in the water to reduce, following mitigation actions being put in place, and specifically, the time it takes for nitrogen to move through the soil profile to groundwater, and then to surface water. This means that the effect of actions put in place to reduce nitrogen now may not be seen in the water for some time (the length of time lag varies across the catchment). It also means there is a nitrogen ‘load to come’ from historic land use that is yet to be seen in the water.

The approach to reducing contaminant losses from pastoral farm land implemented by Chapter 3.11 requires:

- stock exclusion from water bodies as a priority mitigation action
- Farm Environment Plans (including those for commercial vegetable producers) that ensure industry-specific good management-farming practice, with monitoring and auditing to ensure outcomes are being achieved, and identify additional mitigation actions to reduce diffuse discharges by specified dates, which can then be monitored⁶
- a property scale nitrogen reference point to be established by modelling current nutrient losses from each property, with no property being allowed to increase losses exceed its reference point⁷ in the future and higher dischargers being required to reduce their nutrient losses
- an accreditation system to be set up for people who will assist farmers to prepare their Farm Environment Plan, and calculate their Nitrogen Reference Point to certify agricultural industry schemes⁸
- Waikato Regional Council to develop approaches outside the rule framework that allow contaminant loss risk factors to be assessed at a sub-catchment level, and implement mitigations that look beyond individual farm boundaries to identify the most cost-effective solutions.

There are a number of existing provisions, including rules, in the Waikato Regional Plan that will continue to apply for point source discharges.

Municipal and industrial point source dischargers will also be required to revise their discharges in light of Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy and the water quality objectives, and sub-catchment limits⁹ and targets⁹ that have been set. This will happen as the current consent terms expire.⁹

There are a range of existing provisions in this Plan that deal with activities that relate to forestry. Forestry activities will continue to be managed by these existing provisions, with the addition of requirements around preparing harvest plans and notifying Waikato Regional Council of harvest activities.¹⁰

In the short term, Land use change from tree cover woody vegetation to animal grazing, or any livestock grazing other than dairy or arable cropping any farming, other than dairy farming to dairy farming, or any land use to commercial vegetable production, will be constrained. Provision has been made for some flexibility of land use for Māori land that has not been able to develop due to historic and legal impediments. As these impediments have had an impact on the relationship between tangata whenua and their ancestral lands, with associated cultural and economic effects, Chapter 3.11 seeks to recognise and provide for these relationships. These constraints on land use change are interim, until a future plan change introduces a second stage, where further reductions in discharges of sediment, nutrients and microbial pathogens from point sources and activity on the land will be required. This second stage will focus on land suitability and how land use impacts on water quality, based on the type of land and the sensitivity of the receiving water. Methods in Chapter 3.11 include the research and information to be developed to support this.¹¹

Reviewing progress toward achieving Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy

The overall intent of Chapter 3.11 is to require resource users to make a start on reducing discharges of contaminants as the first stage of achieving Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy, with on-farm actions carried out and point source discharges reviewed as existing resource consents come up for renewal¹². The staged approach gives people and communities time to adapt, while being clear that further reductions will be required by subsequent regional plans.

Te Ture Whaimana o Te Awa o Waikato The Vision and Strategy contained in each of the three River Acts is required to be reviewed periodically by the Waikato River Authority, which may make changes to insert limits and methods.

The Resource Management Act requires that regional councils commence reviews of their regional plans 10 years after those plans are operative. When this is done in the future, further changes to reduce diffuse and point source discharges will need to follow the initial preparatory stage embodied in Chapter 3.11 of this Plan.¹³

⁶ G Carter PC1-8827, Wairakei Pastoral Ltd PC1-11406

⁷ Balle Bros Group V1PC1-250

⁸ Fish & Game PC1-10998

⁹ J Hathaway PC1-1012

¹⁰ Consequential to deletion of Part B

¹¹ Jack Farms PC1-8026, H and S Brooks PC1-84, Sieling Farms PC1-5465

¹² B Hathaway PC1-3721

¹³ Jack Farms PC1-8026, H and S Brooks PC1-84, Sieling Farms PC1-5465

During the life of this Plan, Waikato Regional Council will track the progress of actions undertaken on the land towards achieving Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy. In addition, research and information collation will be used when this Plan is reviewed, ~~to inform any future property level allocation of contaminant discharges~~¹⁴.

Te Horopaki me ngā Whakamārama

Te whakahaere ngātahi i ngā awa o Waikato me Waipā

E toru ngā Ture mō ngā Awa e whakatū ana i ngā whakaritenga whakahaere ngātahi mō ngā awa o Waikato me Waipā, me ngā riu o aua awa. Ko ngā ture ēnei, ko te Te Ture Whakataunga Kokoraho Raupatu a Waikato-Tainui (Te Awa o Waikato) 2010, ko Te Ture o Ngā Iwi o Te Awa o Waikato 2010, arā o Ngāti Tūwharetoa, o Raukawa, o Te Arawa anō hoki me Te Ture o Ngā Wai o Maniapoto (Te Awa o Waipā) 2012.

Ko ngā āpiti ā-iwi i whai wāhi ki te whanaketanga o te Upoko 3.11, ko Maniapoto rātou ko Raukawa, ko Ngāti Tūwharetoa, ko ngā iwi o ngā awa o Te Arawa me Waikato-Tainui. Kei roto i te ture ngā whakamārama mō te āhua o te whai wāhitanga o ngā iwi o te awa ki ngā tukanga whakarite, arotake, panoni rānei i te mahere ā-rohe. Kei reira anō hoki te here kei runga i te Kaunihera ki te whakatū i tētehi Ohu Mahi Ngātahi i te taha o tēnā iwi, o tēnā iwi o te awa, ko tētehi o ngā aronga, ko te whakatakoto ngātahi i ngā tūhonga ki te Kaunihera mō te panonitanga o te mahere.

I whakatūria Te Ture Whaimana o Te Awa o Waikato e ngā Ture e toru mō ngā Awa hei pukapuka matua e whakatau ana i te anga whakamuatanga mō ngā awa o Waikato me Waipā. Mehemea ka kitea he taupatuatutanga i tētehi Tauākī kaupapa here ā-motu, i te Tauākī kaupapa here takutai moana a Aotearoa rānei, kei runga ko Te Ture Whaimana, waihoki he wāhanga tēnei nō Te Tauākī Kaupapa Here ā-Rohe a Waikato.

E kī ana te Ture Whaimana, kua whakakinongia ngā awa o Waikato me Waipā, ā, me whakaora mai, me tiaki anō hoki ka tika, heoi he mahi anō i tua atu i ērā. E kaha arotahingia ana tētehi whāinga i tēnei upoko, arā ko te whakaoranga o te kounga wai o roto i te awa o Waikato, kia pai ai tā te tangata kaukau ki roto, kia pai ai te kahi kai i ngā wāhi katoa o te awa, mai i te mātāpuna ki te pūaha. E whakatinanahia ana te Ture Whaimana i te Upoko 3.11 mā te:

- whakaiti i te ngaronga o te hauota, o te pūtūtae-whetū, o te Waipārapara me te tukumate ora poto i te whenua
- whakahaere tonu i te rukenga roha me te rukenga pū tuwha o te hauota, o te pūtūtae-whetū, o te Waipārapara, o te tukumate ora poto anō hoki
- tuku i te tangata me ngā hapori kia taunga haere ai rātou ki ngā here o te Upoko 3.11 me te tautoko i ngā tūmahi kia tutuki ai ngā whāinga taupoto, i runga anō i te mārama me whai wāhi tonu ki ngā mahere ā-rohe ka whai ake, te whakaitinga o te ngaronga o te hauota, o te pūtūtae-whetū, o te Waipārapara me te tukumate ora poto i te whenua
- whakaū kia whakahaere tonu te Kaunihera ā-rohe o Waikato i ngā rangahau, i te aroturuki me te mātā i ngā rerekētanga ā-whenua, i roto anō hoki i te wai kia āhei ai te whai i te Mātauranga Māori me ngā tikanga pūtaiao o te wā, ka puta mai ana aua tikanga
- whakarite i ngā herenga o anamata mō ngā mahi i runga i te whenua, me te āpiti atu i ngā tāpuitanga¹⁴ e whakaū ana i te hāngai pū o ngā tūmahi me te whakahaeretanga o te whakamahinga whenua ki ngā āheinga ahupūngao koirora o te whenua, ki te wāhi me ngā pānga o ngā rukenga ki ngā roto, ki ngā awa me ngā repo i roto i te riu.

Te huarahi o te mahi ngātahi

I whakaae ngā āpiti hautū ngātahi ki te whai i te huarahi o te mahi ngātahi ki te whakatewhatewha me te whakawhanake i ngā huarahi whakahaere wai Māori ka whāia i ngā riu o ngā awa o Waikato me Waipā.

Ko tētehi āhuatanga matua o te huarahi o te mahi ngātahi ko te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga, i noho mai hei kanohi mō te hunga whai pānga me te hapori whānui i te kaupapa o Wai Ora: He Rautaki Whakapaipai. Ko te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga te huarahi matua i mahi ngātahi ai te hunga whai pānga me te hapori whānui i te kaupapa. I āta arotake, i āta whiriwhiri māriri anō te rōpū i ngā rauemi whāiti nā tētehi rōpū mātanga ā-waho i ahu mai i tētehi tūmomo pekanga mātauranga. I te Panonitanga Tuatahi o te Mahere e Marohitia nei, i whai hoki te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga i ngā whakaaro o ē rātou rāngai me te hapori, ā, nā rātou ngā kōrero o te Upoko 3.11 i whakatakoto ki te hunga whakatau.

Te Whakawhiti Kōrero

¹⁴ FANZ PC1-9789

Kei roto i te Rārangi Whakawhiti Kōrero 1 o te RMA ngā here kia mātua whakawhiti kōrero me ētehi hunga, pērā i ngā rūnanga ā-iwi, i te wā e whakaritea ana te Whakataurangitanga. Kua oti ngā whakawhitinga kōrero me ngā hunga e pāngia ana, tae atu ki ngā rūnanga ā-iwi e hāngai ana, ā, kua āta arohia ngā take i ara ake ai i aua whakawhitinga kōrero e te Kaunihera ā-Rohe o Waikato i te whakaritenga o Te Whakataurangitanga Tuatahi. Nā ngā whakawhitinga kōrero i hua ai Te Whakataurangitanga i te Panonitanga Tuatahi o te Mahere e Marohitia nei.

Te Kounga Wai me te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori

Kua herea ngā kaunihera ā-rohe e te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori 2016 ki te whakarite whāinga wai Māori[^] me te whakatakoto tāpuitanga[^], whāinga[^] rānei (he tāpuitanga te whāinga me whakatutuki i roto i te wā i tohua ai). Me mātua whakaū ngā kaunihera ā-rohe kāore e nui rawa te tohanga[^] o te rawa wai, me whakatika rānei e rātou tērā tohanga mehemea kua whērā kē.

E whakaaturia mai ana i ngā hua o te aroturuki ā-kounga wai, ahakoa ngā rerekētanga i ngā wāhi katoa o ngā riu o ngā awa o Waikato me Waipā, he kino tonu ngā pānga ki ngā hōpua wai nā ngā rukenga ā-hauota, ā-pūtūtae-whetū, ā-Waipārapara, ā-tukumate ora poto anō hoki. I whakatau te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga, he nui rawa te tohanga[^] i te horopaki o te kounga wai. Kāore e taea e ngā hōpua wai o ngā riu o ngā awa o Waikato me Waipā te whakaputa ētehi atu rukenga ā-hauota, ā-pūtūtae-whetū, ā-Waipārapara, ā-tukumate ora poto anō hoki, me te kore e puta o ngā pānga kino ki ngā uara o te hapori. Me whakaiti ngā tāhawahawatanga roha me ngā tāhawahawatanga i ngā pū tuwha e tutuki ai ngā whāinga ā-tau me ngā whāinga tauroa mō te wai Māori, o te Upoko 3.11.

Ka tohutohu te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori i te Kaunihera ā-Rohe o Waikato ki te whakarite whāinga wai Māori e whakamana ana i ngā whāinga o te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori, e whakamārama ana anō hoki i te āhua o te wai e hiahiatia ana e ngā hapori ā-rohe o Waikato hei ngā tau e heke mai ana.

Ko tētehi wāhanga o te tukanga o te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori i whāia ai hei whakarite i te Upoko 3.11, ko te tautuhi i ngā wae whakahaere wai māori me ngā uara o ia wae, kātahi ka kōwhiria ngā āhuatanga o te kounga wai[^] e hāngai ana me ngā āhuatanga[^] ka taea te aroturuki i roto i te wā. Mā ngā whāinga wai Māori[^] me ngā tāpuitanga[^], ngā whāinga[^] rānei e whakatau ngā here e tutuki ai ngā āhuatanga[^]. Kei raro i te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori, ko te tāpuitanga[^] te taumata o te whakamahinga o ngā rawa e wātea ana, kia āhei ai te whakatutukitanga o tētehi whāinga wai Māori.

I tautuhi te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga i te whakamahinga rawa ka pā ki te whakatutukitanga o ngā whāinga wai Māori[^], ki ngā hiahia tauroa mō te kounga wai me te whakatutukitanga o te Ture Whaimana. E takoto ana i te Upoko 3.11 ngā kaupapa here me ngā tikanga e here ana i ngā mahi i runga i te whenua me te rukenga ki te whenua, ki te wai rānei.

Ka pā ki ngā whakatupuranga maha te whakatutukitanga o Te Ture Whaimana

Kua kōwhiri te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga i te 80 tau hei pae wā ki te whakatutuki i ngā whāinga kounga wai o Te Ture Whaimana. He pae wā tēnei ka pā ki ngā whakatupuranga maha, ā, he nui ake hoki te tūmanako i ngā pae o raro ā-motu kua whakatakotoria i te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori, nā te mea e whai ana tēnei ki te whakatutuki i ngā paerewa teitei ake kia pai ai tā te tangata kaukau ki roto i te wai, kia pai ai hoki te kohi kai i ngā wāhi katoa o ngā awa o Waikato me Waipā, mai i ngā mātāpuna ki ngā pūaha, me ngā riu. E ai ki ngā pārongo e wātea ana ināianei, kua whakatau te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga ka nui te utu, ka uua hoki te whakatutukitanga katoatanga o Te Ture Whaimana i mua i te tau 2096. Kua kitea te ‘āputa auahatanga’ i te pae wā o te 80 tau, arā e whakatutuki katoatia ai te kounga wai me whai hangarau, me whai tikanga rānei kāore anō kia hua ake, kāore anō rānei e taea, i ngā āhuatanga ā-ōhanga. Hei āpiti atu, e mōhiotia ana ināianei, e tutuki ai te whakaoranga o te kounga wai me whakarerekē te whakamahinga o ētehi whenua nui tonu, he āhua nui, he tino nui rānei te rukenga o ērā whenua kia iti ake te rukenga (hei tauria, mā te whakatupu rākau).

Kua whai te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga i tētehi huarahi wāwāhi nā te nui o ngā panonitanga me whai kia whakaorangia mai anō, kia tiakina hoki te kounga wai i te roanga o te pae wā o te 80 tau. Nā tēnei huarahi i wāhia ai ngā whakatikahanga me puta mai, ko te tuatahi o ngā whakatikahanga he whakarite, he whakatinana anō hoki i ngā tūmomo tūmahi me mahi rawa i roto i te tekau tau, e tutuki ai te tekau ōrau o ngā panonitanga, i te kounga wai ināianei ki te kounga wai tauroa hei te tau 2096. E kitea ana i tēnei huarahi wāwāhi he raru pea ka pā ki te pāpori i te nui o ngā panonitanga ā-whakamahinga whenua i roto i te wā poto, ā, he nui te mahi, he nui hoki te utu ki te hunga whakamahi rawa, ki te ahumahi, ki te Kaunihera ā-rohe o Waikato hoki ki te whakarite i te tukanga panonitanga i te wāhanga tuatahi. Me whai tukanga whakatinana hou, me whai tohungatanga, me whakatū hui whiriwhiri kaupapa hei taunaki i te wāhanga tuatahi. Mā te huarahi wāwāhi e whai wā ai kia puta mai ngā hangarau me ngā tikanga auaha e tika ana kia puta hei whakatutuki i ngā whāinga[^] me ngā tāpuitanga[^] i roto i ngā mahere ā-rohe ka whai ake.

Nā te nui o te panonitanga me puta rawa e tutuki ai ngā tāpuitanga[^] i roto i te 80 tau, he whāinga nui tonu te whakatutuki i te wāhanga tuatahi o ngā whāinga wai Māori tauroa o tēnei Mahere. Nā konei, kāore pea e kitea i roto i te wā poto te pānga o ngā tūmahi me ngā panonitanga i runga i te whenua ki te kounga wai i roto i ngā hōpua wai. I whēnei ai, nā te roa o te wā e memeha haere ai te kukūnga o ngā tāhawahawatanga i roto i te wai, whai i muri mai i te whakaritenga o ngā mahi whakangāwari i ngā pānga, otirā nā te roa o te wā e heke ai te hauota i te oneone ki ngā wai o te whenua, tae atu ki te wai ka rere ki ngā kōawāwa. Nā konei, ka roa pea te wā kātahi ka kitea i roto i te wai te pānga o ngā tūmahi o nāianeī kua whakaritea kia iti iho ai te hauota (ka rerekē te roa o te wā i ngā wāhi katoa o te riu). I runga hoki i tērā, he 'utanga hauota' kāore anō kia kitea i te wai e puta tonu mai ana nā te whakamahinga whenua i mua.

I runga i te huarahi e whāia ana i te Upoko 3.11 hei whakaiti i te ngaronga o ngā tāhawahawatanga i ngā pāmu kararehe, me:

- aukati i ngā kararehe i ngā hōpua wai hei tūmahi whakangāwari totoa
- whai Mahere Taiao ā-Pāmu (tae atu ki ngā kaiwhakatupu huawhenua ā-arumoni) e whakaū ana i ngā tikanga whakahaere pai ā-ahumahi, e tautuhi ana anō hoki i ētehi atu tūmahi whakangāwari hei whakaiti i ngā rukenga roha i mua i ētehi rā ka āta tohua, ka aroturukihia ai
- whakarite tauine tohu hauota ā-whenua mā te whakatauirā i ngā ngaronga whakamōmona i ia whenua, kāore tētehi whenua e āhei ki te hipa i tana tohu hei ngā tau e heke mai ana, ā, me whakaiti rawa ngā kairuke kaha rawa i ngā ngaronga whakamōmona
- whakarite tētehi pūnaha whakamanatanga mō te hunga ka āwhina i ngā kaupāmu ki te whakarite i ā rātou Mahere Taiao ā-Pāmu, ki te whakapūmau anō hoki i ngā kaupapa ā-ahumahi ahuwahenua
- whakawhanake te Kaunihera ā-rohe o Waikato i ētehi huarahi kāore e herea ana ki te anga ā-ture kia āhei ai te arotake i ngā tūponotanga ngaronga tāhawahawatanga i ngā riu o ngā kautawa, ka whakatinana hoki i ngā mahi whakangāwari pānga kāore e herea ki ngā rohenga o ngā pāmu, hei tautuhi i ngā urupare, iti katoa te utu.

He nui ngā whakatau kua mana kē me ngā ture kei roto i tēnei Mahere, ka hāngai tonu ki ngā rukenga pū tuwha.

Me panoni rawa ngā kairuke i ngā pū tuwha nō ngā whakahaere ā-rohe, nō ngā ahumahi anō hoki i ā rātou rukenga kia hāngai ki Te Ture Whaimana, ki ngā whāinga hoki mō te kounga wai, ki ngā tāpuitanga[^] o ngā riu kōawāwa me ngā whāinga[^] kua whakaritea. Ka whēnei hei te paunga o ngā here ā-whakaaetanga o tēnei wā.

He nui ngā tūmomo whakataunga kei roto i tēnei Mahere e hāngai ana ki ngā mahinga ngahere. Ka riro tonu mā ēnei whakataunga ngā mahinga ngahere e whakahaere, engari ka tāpirihia atu ētehi atu here e pā ana ki te whakarite mahere hauhake me te whakamōhio i te Kaunihera ā-Rohe o Waikato ki ngā tūmahi hauhake.

Hei ngā tau e tū tata mai ana, ka herea te panonitanga ā-whakamahinga whenua, whēnei i te huringa o te ngahere hei pāmu kararehe, i te huringa rānei o te pāmu whakatupu kararehe hei pāmu miraka kau. Kua whakaritea kia āhua ngāwari ake ngā here mō te whakamahinga o ngā whenua Māori kāore anō kia whanake nā ngā raruraru ā-hītori me ngā raruraru ā-ture. Nā te mea kua pā ēnei raruraru ki te hononga i waenganui i te tangata whenua me ō rātou whenua tūpuna, me ngā pānga ā-ahurea, ā-ōhanga i puta i tērā, e whai ana te Upoko 3.11 ki te whakamana, ki te whakarite hoki i ēnei hononga. Mō tēnei wā ēnei here i runga i ngā panonitanga ā-whakamahinga whenua, kia whakatakotoria rā anōtia tētehi wāhanga tuarua i tētehi panonitanga ā-mahere o anamata, e herea ai ngā kairuke ki te whakaiti anō i ngā rukenga Waipārapara, whakamōmona, tukumate ora poto anō hoki i ngā rukenga pū tuwha me ngā mahi i runga i te whenua. Ka aro tēnei wāhanga tuarua ki te pai o te whenua me te pānga o te whakamahinga whenua ki te kounga wai, i runga i te āhua o te whenua me te āhua o ngā wai taketake. Kei te Upoko 3.11 ngā tikanga whēnei i ngā rangahau me ngā pārongo me whakawhanake ake hei taunaki i tēnei.

Te arotake i te kokenga ki te whakatutuki i Te Ture Whaimana o Te Awa o Waikato

Ko te whāinga matua o te Upoko 3.11, he here i ngā kaiwhakamahi rawa kia tīmata rātou ki te whakaiti i ngā rukenga tāhawahawatanga, koia nei te wāhanga tuatahi e tutuki ai Te Ture Whaimana, ka whakahaerehia ētehi tūmahi i runga pāmu, ka arotakehia anō hoki ngā rukenga pū tuwha ka tata ana ki te wā e whakahoungia ai ngā whakaaetanga rawa. Mā te huarahi wāwāhi e taunga haere ai te tangata me ngā hapori, i runga i te mārāma he whakaitinga atu anō ka whakaritea e ngā mahere ā-rohe ka whai ake.

Me arotake pokapoka Te Ture Whaimana kei roto i ngā Ture e toru mō ngā Awa e te Te Manatū Whakahaere i Te Awa o Waikato, ākuanei pea māna e panoni aua tuhinga kia whakaurua atu he tāpuitanga, he tikanga anō hoki.

E here ana Te Ture Penapena Rawa i ngā kaunihera ā-rohe kia tīmata tā rātou arotake i ā rātou mahere ā-rohe kia pau te tekau tau e whakahaerehia ana aua mahere. Kia oti tēnei hei ngā tau e heke mai ana, me whai i muri i te wāhanga tuatahi

kei roto i te Upoko 3.11 o tēnei Mahere ētehi atu panonitanga hei whakaiti i ngā rukenga roha me ngā rukenga i ngā pū tuwha.

I te wā e whāia ana tēnei Mahere, ka mātai te Kaunihera ā-rohe o Waikato i te kokenga o ngā tūmahi e kawea ana i runga i te whenua hei whakatutuki i Te Ture Whaimana. Hei āpiti atu, ka whakamahia ngā rangahau me ngā kohinga pārongo i te arotakenga o tēnei Mahere, hei ārahi i ngā tohanga ā-whenua o ngā rukenga tāhawahawatanga hei ngā tau e heke mai ana.

3.11.1 Values and uses for the Waikato and Waipā Rivers/Ngā Uara me ngā Whakamahinga o ngā Awa o Waikato me Waipā¹⁵

The National Policy Statement – Freshwater Management Policy CA2 requires certain steps to be taken in the process of setting limits¹⁵. These include establishing the values¹⁶ that are relevant in a FMU¹⁶, identifying the attributes¹⁶ that correspond to those values¹⁶, and setting objectives based on desired attribute states¹⁶. This section describes values and uses for the Waikato and Waipā Rivers, to provide background to the objectives and limits¹⁶ in later sections.

Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato¹⁶

“Our vision is for a future where a healthy Waikato River sustains abundant life and prosperous communities who, in turn, are all responsible for restoring and protecting the health and wellbeing of the Waikato River, and all it embraces, for generations to come.”¹⁷

The values below have been prepared and are supported by the Collaborative Stakeholder Group.

Te Mana o te Wai: Mana Atua, Mana Tangata

Values can be thought of in terms of Mana Atua and Mana Tangata, which represent Te Mana o te Wai¹⁸. Mana Atua represents the intrinsic values of water including the mauri (the principle of life force), wairua (the principle of spiritual dimension) and inherent mana (the principle of prestige, authority) of the water and its ecosystems in their natural state. Mana Tangata refers to values of water arising from its use by people for economic, social, spiritual and cultural purposes. Mana Atua and Mana Tangata values encompass past, present and future.

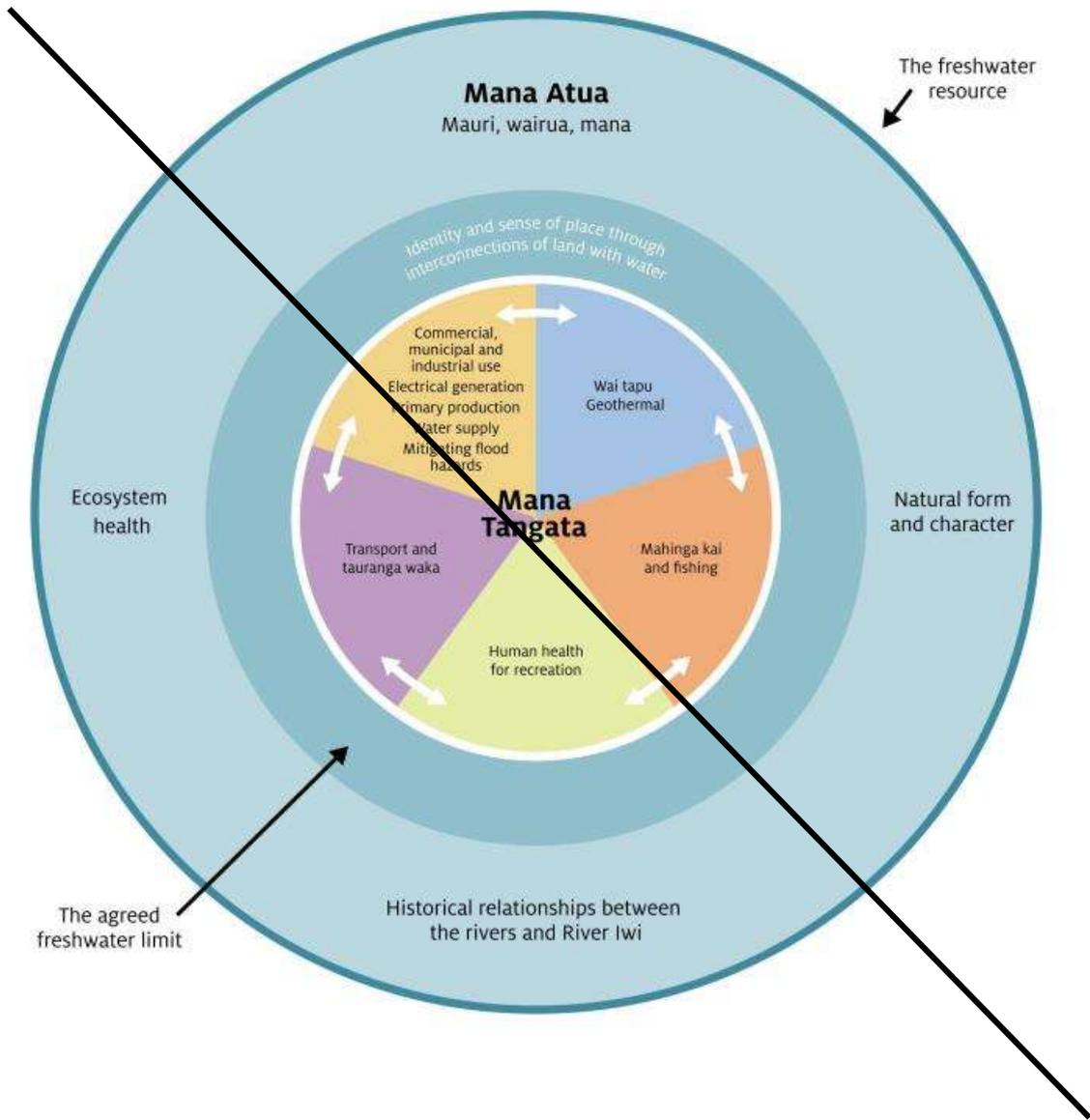
A strong sense of identity and connection with land and water (hononga ki te wai, hononga ki te whenua) is apparent through the Vision and Strategy and the many values associated with the rivers. This is represented in the figure below as a unifying value that provides an interface between the Mana Atua and Mana Tangata values.

¹⁵ Save Lake Karapiro Inc PC1-5610

¹⁶ *The Nga Wai o Maniapoto (Waipa River) Act 2012 extended Te Ture Whaimana o te Awa o Waikato to also cover the Waipa River and its catchment*

¹⁷ *The Vision and Strategy is intended by Parliament to be the primary direction setting document for the Waikato River and activities within its catchment affecting the Waikato River. Values and uses are intrinsic to, and embedded in the Vision and Strategy.*

¹⁸ *The National Policy Statement for Freshwater Management 2014 states that the aggregation of a range of community and tangata whenua values, and the ability of fresh water to provide for them over time, recognises the national significance of fresh water and Te Mana o te Wai.*



Hononga ki te wai, hononga ki te whenua – Identity and sense of place through the interconnections of land with water

- The rivers contribute to a sense of community and sustaining community wellbeing.
- The rivers are an important part of whānau/family life, holding nostalgic feelings and memories and having deep cultural and historical significance.
- For River Iwi and other iwi, respect for the rivers, wetlands and springs lies at the heart of the spiritual and physical wellbeing of iwi and their tribal identity and culture. The river, wetlands and springs are not separate from the people but part of the people, “Ko au te awa, ko te awa ko au” (I am the river and the river is me).
- Whanaungatanga is at the heart of iwi relationships with rivers, wetlands and springs. Te taura tāngata is the cord of kinship that binds iwi to rivers, wetlands and springs. It is a braid that is tightly woven, tying in all its strands. It is unbroken and infinite, forming the base for kaitiakitanga and the intergenerational role that iwi have as kaitiaki.
- The rivers are a shared responsibility, needing collective stewardship: kaitiakitanga – working together to restore the rivers. There is also an important intergenerational equity concept within kaitiakitanga.
- Mahitahi (collaborative work) encourages us all to work together to achieve common goals.

3.11.1.1 Mana Atua – Intrinsic values

Intrinsic values – Ancestry and History¹⁹

Ko te whakapapa o ngā iwi ki ōna awa tūpuna Ko ngā hononga tūpuna me ngā hononga o mua i waenga i ngā iwi o te awa me ētehi atu iwi me ngā awa, ngā repo me ngā puna / Ancestral and Historical relationships connections between the rivers, wetlands, springs and River Iwi and other iwi

Ko ngā kōrero tūpuna me ngā Kōrero o Muao neherā / Ancestry and History

<p>Each River Iwi and other iwi have has their own unique and intergenerational relationship with the rivers, wetlands and springs.</p>	<ul style="list-style-type: none"> • The Rivers, wetlands and springs have always been seen as taonga (treasures) to all River Iwi and other iwi. • The Rivers, wetlands and springs have always given River Iwi and other iwi a strong sense of identity and connection with the land and water. • Rivers, wetlands and springs were used holistically; River Iwi and other iwi understood the functional relationships with and between all parts of the rivers, wetlands and springs, spiritually and physically as kaitiaki. • Tribal taniwha and tupua dwell in the rivers which are also the location of continued spiritual and cultural traditions and practices maintained over the many centuries. • Iwi tūpuna inhabited a rohe that teemed with life in the rivers, wetlands and springs. These resources were subject to access and use rights as an essential part of kaitiakitanga. • Iwi strive to maintain and restore these relationships despite the modification and destruction that has occurred through different types of development along affecting the rivers, wetlands and springs.
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Intrinsic values – Ecosystem health

Ko te hauora me te mauri o te wai / The health and mauri of water

Ecosystem health

<p>The Waikato and Waipā catchments support resilient freshwater ecosystems and healthy freshwater populations</p>	<ul style="list-style-type: none"> • Clean fresh water restores and protects aquatic native vegetation to provide habitat and food for native aquatic species and for human activities or needs, including swimming and drinking.
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¹⁹ Watercare V1PC1-888

of indigenous plants and animals.	<ul style="list-style-type: none"> ▪ Clean fresh water restores and protects macroinvertebrate communities for their intrinsic value and as a food source for native fish, native birds and introduced game species. ▪ Clean fresh water supports native freshwater fish species. ▪ Wetlands and floodplains provide water purification, refuge, feeding and breeding habitat for aquatic species, habitat for water fowl and other ecosystem services such as flood attenuation. ▪ Fresh water contributes to unique habitats including peat lakes, shallow riverine lakes and karst formations which all support unique biodiversity. ▪ Rivers and adjacent riparian margins have value as ecological corridors.
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Intrinsic values – Natural form and character

Ko te hauora me te mauri o te taiao / The health and mauri of the environment

Natural form and character

Retain the integrity of the <u>lakes, rivers and wetlands</u> within the landscape and its aesthetic features and natural qualities for people to enjoy.	<ul style="list-style-type: none"> ▪ The <u>Lakes, rivers and wetlands</u>²⁰ have amenity and naturalness values, including native vegetation, undeveloped stretches, and significant sites. ▪ People are able to enjoy the natural environment; it contributes to their health and wellbeing. ▪ The rivers are an ecological and cultural corridor. ▪ The <u>lakes, rivers and wetlands</u> as a whole living entity.
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3.11.1.2 – Mana Tangata – Use values

Use values – Wai tapu

Ko ngā wai tapu me ngā wai kino / Sacred and harmful waters

Wai tapu and wai kino

Area of water body set aside for spiritual activities that support spiritual, cultural and physical wellbeing <u>or have properties that require additional caution or care.</u>	<ul style="list-style-type: none"> ▪ The <u>Lakes, rivers and wetlands</u> are a place for sacred rituals, wairua, healing, spiritual nurturing and cleansing. ▪ The <u>Lakes, rivers and wetlands</u> provide for cultural and heritage practices and cultural wellbeing, particularly at significant sites. ▪ <u>The Lakes, rivers and wetlands have different states of wai tapu and wai kino that are adhered to and respected.</u>
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Use values – Geothermal

Ko ngā Ngāwhā / Geothermal

Geothermal

A valued resource that is naturally gifted to sustain certain activities (meeting spiritual and physical needs).	<ul style="list-style-type: none"> ▪ Geothermal areas and their various resources were prized by tūpuna (ancestors) for their many uses and are still valued and used today. ▪ Geothermal areas of the river have natural form and character, and unique flora found only in the geothermal environment. ▪ Geothermal areas are a special microclimate.
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Use values – Mahinga kai

Ko ngā wāhi mahinga kai / Food gathering, places of food

²⁰ DoC PC1 8136, 8189, 8152, 8532, 8533, 8535, 8540

Mahinga kai

<p>The ability to access the Waikato and Waipā Rivers, lakes, and wetlands and their tributaries to gather sufficient quantities of kai (food) that is safe to eat and meets the social and spiritual needs of their stakeholders.</p>	<ul style="list-style-type: none">▪ The Lakes, rivers and wetlands provide for freshwater native species, native vegetation, and habitat for native animals.▪ The Lakes, rivers and wetlands provide for freshwater game and introduced kai species.▪ The Lakes, rivers and wetlands provide for cultural wellbeing, knowledge transfer, intergenerational harvest, obligations of manaakitanga (to give hospitality to, respect, generosity and care for others) and cultural opportunities, particularly at significant sites.▪ The rivers should be safe to take food from, both fisheries and kai.▪ The Lakes, rivers and wetlands support aquatic life, healthy biodiversity, ecosystem services, flora and fauna and biodiversity benefits for all.▪ The rivers are a corridor.▪ The Lakes, rivers and wetlands provide resources available for use which could be managed in a sustainable way.▪ The rivers provide for recreation needs and for social wellbeing.²¹
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Use values—Human health for recreation

Ko te hauora me te mauri o ngā tāngata / The health and mauri of the people

Human health for recreation

<p>The Lakes and rivers are a place to swim and undertake recreation activities in an environment that poses minimal risk to health.</p>	<ul style="list-style-type: none">▪ The Lakes and rivers provide for recreational use, social needs and social wellbeing, are widely used by the community, and are a place to relax, play, exercise and have an active lifestyle.▪ An important value for the lakes and rivers is cleanliness; the lakes and rivers should be safe for people to swim in.▪ The lakes and rivers provide resources available for use which could be managed in a sustainable way.
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Use values—Transport and tauranga waka

He urungi / Navigation

Transport and tauranga waka

<p>All communities can use the lakes and rivers to pilot their vehicles and waka and navigate to their destinations.</p>	<ul style="list-style-type: none">▪ The Lakes and rivers provide for recreational use (navigation), and sporting opportunities.▪ The Lakes and rivers are a corridor, mode of transport and mode of communication.▪ The Lakes and rivers provide for culture and heritage, cultural wellbeing, and social wellbeing, particularly at significant sites.
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Use values—Primary production

Ko ngā mahi māra me ngā mahi ahu matua / Cultivation and primary production

Primary production

<p>The rivers support regionally and nationally significant primary production in the catchment (agricultural,</p>	<ul style="list-style-type: none">▪ The rivers support a wide variety of primary production in the catchment, including dairy, meat, wool, horticulture and forestry.▪ Due to the economies of scale of these industries, other service sectors, such as agritech, aviation and manufacturing, are able to operate.
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²¹ Federated Farmers V1PC1 106

<p>horticultural, forestry). These industries contribute to the economic, social and cultural wellbeing of people and communities, and are the major component of wealth creation within the region. These industries and associated primary production also support other industries and communities within rural and urban settings.</p>	<ul style="list-style-type: none"> ▪ These industries combined contribute significantly to regional and national GDP, exports, food production and employment. ▪ The rivers and the surrounding land offer unique opportunities for many communities and industries to operate, contributing to the lifestyle and sense of community, pride and culture in rural and urban²² Waikato.
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Water supply

Ko ngā hāpori wai Māori / Municipal and domestic water supply

Water supply

<p>The rivers provide for community water supply, municipal supply and drinkable water supply and health.²³</p>	<ul style="list-style-type: none"> ▪ The catchments' surface and subsurface water is of a quality that can be effectively treated to meet appropriate health standards for both potable and non-potable uses.
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Use values – Commercial, municipal and industrial use

Ko ngā āu putea / Economic or commercial development

Commercial, municipal and industrial use

<p>The rivers, lakes, and wetlands provide economic opportunities to people, businesses and industries.</p>	<p>Fresh water is used for industrial and municipal processes, which rely on the assimilative capacity for discharges to surface water bodies. In addition:</p> <ul style="list-style-type: none"> ▪ The Lakes, rivers and wetlands provide for economic wellbeing, financial and economic contribution, individual businesses and the community and the vibrancy of small towns. They are working lakes, rivers and wetlands; they create wealth. ▪ Those industries are important to the monetary economy of Waikato region, enabling a positive brand to promote to overseas markets. ▪ The Lakes, rivers and wetlands provide for domestic and international tourism. Promotion of a clean, green image attracts international and domestic visitors. ▪ The Lakes, rivers and wetlands provide assimilative capacity for wastewater disposal, flood and stormwater, and ecosystem services through community schemes or on site disposal.
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Use values – Electricity generation

Electricity generation

<p>The river provides for reliable, renewable hydro and geothermal energy sources and thermal generation, securing national self-reliance and resilience.</p>	<ul style="list-style-type: none"> ▪ Waikato hydro scheme extends over 186km, comprising Lake Taupō storage, dams, lakes, and power stations. Tongariro Power scheme adds 20 per cent to natural inflows to Lake Taupō. ▪ Huntly Power Station's role in the New Zealand electricity system is pivotal, particularly when weather dependent renewable generation is not available. Fresh water is used for cooling and process water.
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²² Hamilton CC PC1-10067

²³ Federated Farmers V1PC1-117

<p>New Zealand's social and economic wellbeing are dependent on a secure, cost-effective electricity supply system. Renewable energy contributes to our international competitive advantage. Electricity also contributes to the health and safety of people and communities.</p>	<ul style="list-style-type: none"> • Geothermal power stations located on multiple geothermal systems use fresh water for cooling, process water and drilling.
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Use values—Mitigating flood hazards

Mitigating flood hazards

<p>Flood management systems protect land used and inhabited by people and livestock.²⁴</p>	<ul style="list-style-type: none"> • River engineering, including stopbanks and diversions, protect land and infrastructure from damage by flooding.
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²⁴ Hamilton CC PC1-10167

3.11.2 Objectives/Ngā Whāinga

Objective 1: Long term restoration and protection of water quality for each sub-catchment and Freshwater Management Unit/Te Whāinga 1: Te whakaoranga tauroa me te tiakanga tauroa o te kounga wai ki ia riu kōawaawa me te Wae Whakahaere i te Wai Māori

By 2096 at the latest²⁵, the Waikato and Waipā Rivers are restored and protected, which is enabled by a reduction in the discharges of nitrogen, phosphorus, sediment and microbial pathogens to land and water result in achievement of the restoration and protection of the, such that of the 80-year water quality attribute targets states²⁶ in Table 3.11-1 are met²⁷.

Objective 2: Social, economic and cultural wellbeing is maintained in the long term/Te Whāinga 2: Ka whakaungia te oranga ā pāpori, ā ōhanga, ā ahurea hoki i ngā tauroa

Waikato and Waipā communities and their economy²⁸ benefit from the restoration and protection of water quality in the Waikato and Waipā²⁹ River catchments, which enables them people and communities to continue to provide for their social, economic and cultural wellbeing over the long-term³⁰.

Objective 3 (Freshwater Objective)³¹: Short term improvements in water quality in the first stage of restoration and protection of water quality for each sub-catchment and Freshwater Management Unit/Te Whāinga 3: Ngā whakapainga taupoto o te kounga wai i te wāhanga tuatahi o te whakaoranga me te tiakanga o te kounga wai i ia riu kōawāwa me te Wae Whakahaere Wai Māori³²

Actions put in place and implemented over the 10-years from when this Chapter becomes operative³³ by 2026 to reduce diffuse and point source³⁴ discharges of nitrogen, phosphorus, sediment and microbial pathogens, are sufficient to achieve the short term water quality attribute states in Table 3.11-1.³⁵ ten-percent of the required change between current water quality and the 80-year water quality attribute targets in Table 3.11-1. A ten-percent change towards the long-term water quality improvements is indicated by the short-term water quality attribute targets in Table 3.11-1.

Objective 4: People and community resilience/Te Whāinga 4: Te manawa piharau o te tangata me te hāpori

A staged approach to change enables people and communities to undertake adaptive management to continue to provide for their social, economic and cultural wellbeing in the short term while:

- a. considering the values and uses when taking action to achieve the attribute targets for the Waikato and Waipā Rivers in Table 3.11-1; and
- b. recognising that further contaminant reductions will be required by subsequent regional plans and signalling anticipated future management approaches that will be needed to meet Objective 1.³⁶

OR

²⁵ Tangata Whenua – Waikato and Waipa River Iwi PC1-3245

²⁶ Fonterra PC1-10455

²⁷ Watercare PC1-8450; Beef and Lamb PC1-11154

²⁸ Federated Farmers V1PC1-126

²⁹ Mercury NZ Ltd PC1-9506

³⁰ L Aston PC1-6998

³¹ Fonterra PC1-10451

³² Watercare PC1-8450

³³ Federated Farmers V1PC1-129

³⁴ DoC PC1-10540

³⁵ Southern Pastures Ltd Partnership PC1-11095

³⁶ T D Findlay PC1-9406

Objective 4: People and community resilience/Te Whāinga 4: Te manawa piharau o te tangata me te hapori

A staged approach to change³⁷ enables people and communities to undertake adaptive management to continue to provide for their social, economic and cultural wellbeing in the short term while:

- a. considering the values and uses when³⁸ taking action to achieve the attribute^Δ targets^Δ for the Waikato and Waipā Rivers in Table 3.11-1; and
- b. recognising that further contaminant reductions will be required by subsequent regional plans and signalling anticipated future management approaches that will be needed to meet Objective 1³⁹.

Objective 5: Mana Tangata – protecting and restoring tangata whenua values/Te Whāinga 5: Te Mana Tangata – te tiaki me te whakaora i ngā uara o te tangata whenua

Tangata whenua values are integrated into the co-management of the rivers and other water bodies within the catchment such that:

- a. tangata whenua have the ability to:
 - i. manage their own lands and resources, by exercising mana whakahaere, for the benefit of their people; and
 - ii. actively sustain a relationship with ancestral land and with the rivers and other water bodies in the catchment; and
- b. new impediments to the flexibility of the use of tangata whenua ancestral lands are minimised; and
- c. improvement in the rivers' water quality and the exercise of kaitiakitanga increase the spiritual and physical wellbeing of iwi and their tribal and cultural identity.

Objective 6: Whangamarino Wetland/Te Whāinga 6: Ngā Repo o Whangamarino

- a. Nitrogen, phosphorus, sediment and microbial pathogen loads in the catchment of Whangamarino Wetland are reduced in the short term, to make progress towards the long term restoration of Whangamarino Wetland; and
- b. The management of contaminant loads entering Whangamarino Wetland is consistent with the achievement of the water quality attribute^Δ targets^Δ in Table 3.11-1.⁴⁰

Principal Reasons for Adopting Objectives 1-6/Ngā Take Matua me Whai ngā Whāinga 1 ki te 6

Reasons for adopting Objective 1

Objective 1 sets long term limits^Δ for water quality consistent with the Vision and Strategy. Objective 1 sets aspirational 80-year water quality targets^Δ, which result in improvements in water quality from the current state monitored in 2010-2014. The water quality attributes^Δ listed in Table 3.11-1 that will be achieved by 2096 will be used to characterise the water quality of the different FMUs when the effectiveness of the objective is assessed.⁴¹ Objective 1 sets the overall context for what is to be achieved in terms of water quality improvements. There is not any hierarchy of Objectives 1 to 6⁴²

Reasons for adopting Objective 2

Objective 2 sets the long term outcome for people and communities, recognising that restoration and protection of water quality will continue to support communities and the economy. The full achievement of the Table 11-1 2096 water quality attribute^Δ targets^Δ may require a potentially significant departure from how businesses and communities currently function, and it is important to minimise social disruption during this transition.⁴³

³⁷ Rotorua Lakes DC PC1-2468

³⁸ Southern Pastures Ltd Partnership PC1-11096 and Ata Rangī PC1-6113

³⁹ Rotorua Lakes DC PC1-2468

⁴⁰ W Smith V1PC1-682

⁴¹ Watercare PC1-8450; Beef and Lamb PC1-111541

⁴² Oji Ltd PC1-6392

⁴³ Forest and Bird PC1-8220

Reasons for adopting Objective 3

Objective 3 sets short term goals for a 10 year period, to show the first step toward full achievement of water quality consistent with the Vision and Strategy.

The effort required to make the first step may not be fully reflected in water quality improvements that are measurable in the water in 10 years. For this reason, the achievement of the objective will rely on measurement and monitoring of actions taken on the land to reduce pressures on water quality.

Point source discharges are currently managed through existing resource consents, and further action required to improve the quality of these discharges will occur on a case by case basis at the time of consent renewal, guided by the targets and limits set in Objective 1.⁴⁴

Reasons for adopting Objective 4

Objective 4 provides for a staged approach to long term achievement of the Vision and Strategy. It acknowledges that in order to maintain the social, cultural and economic wellbeing of communities during the 80 year journey, the first stage (the short term 10 year period) must ensure that overall costs to people can be sustained.

In the future, a property level allocation of contaminant discharges may be required. Chapter 3.11 sets out the framework for collecting the required information so that the most appropriate approach can be identified. Land use type or intensity at July 2016 will not be the basis for any future allocation of property level contaminant discharges. Therefore, consideration is needed of how to manage impacts in the transition.

Objective 4 seeks to minimise social disruption in the short term, while encouraging preparation for possible future requirements.

Reasons for adopting Objective 5

Objective 5 seeks to ensure that this Plan recognises and provides for the relationship of tangata whenua with ancestral lands, by ensuring the other provisions of Chapter 3.11 do not provide a further impediment to tangata whenua making optimal use of their land. Historic impediments included customary tenure in the nineteenth century, public works, rating law, Te Ture Whenua Māori Act, and confiscation. Some impediments or their effects continue currently, including issues of governance, fragmentation and compliance with central and local government regulations such as regional and district plans, or the emissions trading scheme. Land relevant to this objective is land returned through Treaty of Waitangi settlement, and land under Māori title that has multiple owners.

Reasons for adopting Objective 6

Objective 6 seeks to recognise the significant value of Whangamarino Wetland, a Ramsar site of international importance, and the complexity of this wetland system. It seeks to recognise that the bog ecosystems (which are particularly sensitive to discharges of contaminants) need protection over time. The effort required to restore Whangamarino Wetland over 80 years is considerable and as a minimum needs to halt and begin to reverse the decline in water quality in the first 10 years. This objective describes how wetland restoration needs to be supported by restoration of the Lower Waikato Freshwater Management Unit sub-catchments that flow into Whangamarino Wetland.

⁴⁴ Watercare PC1-8450

3.11.3 Policies/Ngā Kaupapa Here

Policy 1: ~~Manage d Diffuse discharge management s of nitrogen, phosphorus, sediment and microbial pathogens~~/Te Kaupapa Here 1: Te whakahaere i ngā rukenga roha o te hauota, o te pūtūtae-whetū, o te Waipārapara me te tukumate ora potu

~~Reduce Manage and require reductions in~~⁴⁵ ~~catchment-wide and~~⁴⁶ ~~sub-catchment-wide diffuse~~⁴⁷ discharges of nitrogen, phosphorus, sediment and microbial pathogens, by:

- ~~a1. Requiring all farming to operate at Good Farming Practice, or better; and~~⁴⁸
- ~~a2. Establishing a Nitrogen Reference Point for all properties; and~~⁴⁹
 - ~~a. Enabling activities with a low level of contaminant discharge to water bodies provided those discharges do not increase~~⁵⁰; and
 - ~~b. Requiring farming with moderate to high levels of contaminant discharge to water bodies to reduce their discharges proportionate to the amount of (2016) discharge and the water quality improvements required in the sub-catchment~~⁵¹; and
- ~~b1. Establishing the 75th percentile nitrogen leaching value for each river Freshwatwer Management Unit; and~~
- ~~b1a. Requiring farmers farming on properties with a Nitrogen Reference Point greater than the 75th percentile nitrogen leaching value to reduce nitrogen discharge to below the 75th percentile nitrogen leaching value, and other properties to not exceed their Nitrogen Reference Point; and~~⁵²
- ~~b2. Specify controls in a resource consent that ensures diffuse discharges of contaminants will be reducing if a farming activity fails to progress to Good Farming Practices in a timely manner;~~⁵³
- ~~b4. Except as provided for in Policy 16, generally not granting applications that involve a change in the use of the land, or an increase in the intensity of the use of land, unless the application demonstrates clear and enduring reductions in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens; and~~⁵⁴
- ~~c. Progressively excluding cattle, horses, deer and pigs from rivers, streams, drains, wetlands and lakes.~~

Policy 2: ~~Farm Environment Plans Tailored approach to reducing diffuse discharges from farming activities~~/Te Kaupapa Here 2: He huarahi ka āta whakahāngaihia hei whakaiti i ngā rukenga roha i ngā mahinga pāmu

~~Require Farm Environment Plans that:~~

~~Manage and require reductions in~~⁵⁵ ~~sub catchment wide~~⁵⁶ ~~diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens from farming activities on properties and enterprises:~~

- ~~a1. Set out clear, specific and time-bound actions to achieve and maintain Good Farming Practice; and~~⁵⁷
- ~~a. Take Taking a tailored, risk based approach to define mitigation actions on the land that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens, in accordance with Policy 1, with the mitigation actions to be specified in a Farm Environment Plan either associated with a resource consent, or in specific requirements established by participation in a Certified Industry Scheme~~⁵⁸; and
- ~~b. Requiring the same level of rigour in developing, monitoring and auditing of mitigation actions on the land that is set out in a Farm Environment Plan, whether it is established with a resource consent or through Certified Industry Schemes~~⁵⁹; and⁶⁰

⁴⁵ DoC PC1-10643

⁴⁶ WRC V1PC1-1497

⁴⁷ Fert NZ PC1-9707, Federated Farmers V1PC1-162

⁴⁸ Dairy NZ PC1-10196

⁴⁹ Hort NZ PC1-10051, Hira Bhana and Co Ltd PC1-4020 (shifted from Pol 2 with modifications)

⁵⁰ Beef and Lamb PC1-12576

⁵¹ Beef and Lamb PC1-12711 (shifted from Pol 2 with modifications)

⁵² C and G Tierney PC1-7717, Sinclair Family Trust PC1-6180, Federated Farmers V1PC1-357

⁵³ Consequential to DairyNZ PC1-10196

⁵⁴ DoC PC1-71759

⁵⁵ DoC PC1-10643

⁵⁶ Consequential to WRC V1PC1-1497

⁵⁷ Ballance PC1-6862, FANZ PC1-9712

⁵⁸ South Waikato District Council PC1-12522

⁵⁹ Huirimu Farms Ltd PC1-5909, Ata Rangi PC1-6244, Southern Pastures Limited Partnership PC1-11197

⁶⁰ Fish & Game PC1-10998

- ~~b2. Are flexible and able to be updated so that continuous improvement, new technologies and mitigation practices can be adopted, provided that diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens further reduce over time.⁶¹~~
- ~~c. Establishing a Nitrogen Reference Point for the property or enterprise; and⁶²~~
- ~~d. Requiring the degree of reduction in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens to be proportionate to the amount of current discharge (those discharging more are expected to make greater reductions), and proportionate to the scale of water quality improvement required in the sub-catchment; and⁶³~~
- ~~e. Requiring stock exclusion to be completed within 3 years following the dates by which a Farm Environment Plan must be provided to the Council, or in any case no later than 1 July 2026.⁶⁴~~

Policy 3: Tailored approach to r Reducing diffuse discharges from commercial vegetable production systems/Te Kaupapa Here 3: He huarahi ka āta whakahāngaihia hei whakaiti i ngā rukenga roha i ngā pūnaha arumoni hei whakatupu hua whenua

~~Provide for commercial vegetable production while reducing Manage and require reductions in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens by: from commercial vegetable production through a tailored, property or enterprise specific approach where:~~

- ~~a. Enabling commercial vegetable production activities, Flexibility is provided including the flexibility to undertake crop rotations on changing properties parcels of land for commercial vegetable production, within sub-catchments, while reducing average contaminant discharges over time progressively reducing diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens by the commercial vegetable production sector as a whole and each individual applicant; and~~
- ~~b. The maximum area in production for a property or enterprise is established and capped utilising commercial vegetable production data from the 10 years up to 2016; and~~
- ~~c. At the time of consent application, requiring baselines to be established for each property, using commercial vegetable production data from each of the 5 years up to 30 June 2016, for:

 - ~~(i) the maximum area of land in commercial vegetable production; and~~
 - ~~(ii) the Nitrogen Reference Point; and~~
 - ~~(iii) the diffuse discharge management practices undertaken on the property; and Establishing a Nitrogen Reference Point for each property or enterprise; and~~~~
- ~~c1. Providing for an increase in land area used for commercial vegetable production only where the applicant can demonstrate a net reduction in diffuse discharges of each of nitrogen, phosphorus, sediment and microbial pathogens; and~~
- ~~d. Requiring all commercial vegetable production to operate at Good Farming Practice, or better, demonstrated through Farm Environment Plans A 10% decrease in the diffuse discharge of nitrogen and a tailored reduction in the diffuse discharge of phosphorus, sediment and microbial pathogens; is achieved across the sector through the implementation of Best or Good Management Practices; and~~
- ~~e. Identified mitigation actions are set out and implemented within timeframes specified in either a Farm Environment Plan and associated resource consent, or in specific requirements established by participation in a Certified Industry Scheme.~~
- ~~f. Commercial vegetable production enterprises that reduce nitrogen, phosphorus, sediment and microbial pathogens are enabled; and~~
- ~~g. The degree of reduction in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens is proportionate to the amount of current discharge (those discharging more are expected to make greater reductions), and the scale of water quality improvement required in the sub-catchment.~~
- ~~h. Providing for resource consents to encompass multiple properties within a single sub-catchment, provided that:

 - ~~(i) c, c1 and d above are met; and~~
 - ~~(ii) There is clear accounting against baselines across the multiple properties, including on any land that is no longer used for commercial vegetable production, such that sub-catchment-wide diffuse discharges progressively decrease.⁶⁵~~~~

⁶¹ Federated Farmers V1PC1 -175

⁶² Hort NZ PC1-10051, Hira Bhana and Co Ltd PC1-4020 (shifted to Pol 1 with modifications)

⁶³ Beef and Lamb PC1-12711 (shifted to Pol 1 with modifications)

⁶⁴ G and J Jeffries PC1-12802

⁶⁵ Federated Farmers PC1-10817, Federated Farmers V1PC1-176, Balle Bros PC1-11407, Charion Investment Trust PC1-7691, DoC PC1-10653, Hira Bhana PC1-4145, Hort NZ PC1-10052

~~Policy 4: Future diffuse discharge reductions-Enabling activities with lower discharges to continue or to be established while signalling further change may be required in future/~~Te Kaupapa Here 4: Te tuku kia haere tonu, kia whakatūria rānei ngā tūmahi he iti iho ngā rukenga, me te tohu ake ākuanei pea me panoni anō hei ngā tau e heke mai ana

~~Manage sub-catchment wide diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens, and enable existing and new low discharging activities to continue provided that cumulatively the achievement of Objective 3 is not compromised. Activities and uses currently defined as low dischargers may in the future need to Recognise that future regional plan changes or regional plans are likely to require all farming to make further reductions in the take mitigation actions that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens in order for Objective 1 to be met.~~⁶⁶

Policy 4A: Duration of resource consents for farming

Grant resource consents that authorise farming for a duration of not more than 12 years, with the same expiry year within each sub-catchment,⁶⁷ to enable further reductions in diffuse discharges to be implemented through replacement resource consents rather than by way of a review of consent conditions

Policy 5: Staged approach/Te Kaupapa Here 5: He huarahi wāwāhi

Recognise that:

- a. All farmers, businesses and communities⁶⁸ will need to contribute to achieving the water quality attribute states⁶⁹ in Table 3.11-1; and
- b. Changes in practices and activities need to start immediately⁷⁰; and
- c. The rate of change will need to be staged over the coming decades to minimise social, economic⁷¹ and cultural disruption and enable innovation and new practices to develop; and
- d. Responding to the reasonably foreseeable effects of climate change will mean that different regulatory and non-regulatory responses may be needed in future.⁷²

~~Recognise that achieving the water quality attribute targets set out in Table 11-1 will need to be staged over 30 years, to minimise social disruption and allow for enable innovation and new practices to develop, while making a start on reducing discharges of nitrogen, phosphorus, sediment and microbial pathogens, and preparing for further reductions that will be required in subsequent regional plans.~~

Policy 6: Restricting land use change/Te Kaupapa Here 6: Te here i te panonitanga ā whakamahinga whenua

~~Except as provided for in Policy 16, land use change consent applications that demonstrate an increase in the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens will generally not be granted.~~

~~Land use change consent applications that demonstrate clear and enduring decreases in existing diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens will generally be granted.~~⁷³

⁶⁶ C Barker PC1-3748

⁶⁷ DoC PC1-10739

⁶⁸ M & R Johnston PC1-8099, K Stokes PC1-5248

⁶⁹ Winstone Aggregates PC1-3607

⁷⁰ Forest and Bird PC1-8257

⁷¹ Charion Investment Trust PC1-7748

⁷² WRC PC1-2985

⁷³ Federated Farmers V1PC1-194

Policy 7: Preparing for further diffuse discharge reductions allocation⁷⁴ in the future/Te Kaupapa Here 7: Kia takatū ki ngā tohanga hei ngā tau e heke mai ana

Prepare for further diffuse discharge reductions and any future property or enterprise level allocation of diffuse discharges⁷⁵ of nitrogen, phosphorus, sediment and microbial pathogens that will be required by subsequent regional plans, by implementing the policies and methods in this chapter. To ensure this occurs⁷⁶, collecting information and undertaking research to support this, including collecting information about current discharges, developing appropriate modelling tools to estimate contaminant discharges, and researching the spatial variability of land use and diffuse discharges contaminant losses and the effect of contaminant discharges in different parts of the catchment that will assist in defining 'land suitability'.⁷⁷

Any future allocation should consider the following principles:

- a. Land suitability⁷⁸ which reflects the biophysical and climate properties, the risk of contaminant discharges from that land, and the sensitivity of the receiving water body, as a starting point (i.e. where the effect on the land and receiving waters will be the same, like land is treated the same for the purposes of allocation); and
- b. Allowance for flexibility of development of tangata whenua ancestral land; and
- c. Minimise social disruption and costs in the transition to the 'land suitability' approach; and
- d. Future allocation decisions should take advantage of new data and knowledge.⁷⁹

Policy 8: Prioritised implementation/Te Kaupapa Here 8: Te raupapa o te whakatinanatanga

Prioritise the management of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens land and water resources by implementing Policies 2, 3 and 9, and⁸⁰ in accordance with the prioritisation of areas set out in Table 3.11-2. Priority areas include:

- a. Sub-catchments where there is a greater gap between the water quality targets^Δ in Objective 1 (Table 3.11-1) and current water quality; and
- b. Lakes Freshwater Management Units^Δ; and
- c. Whangamarino Wetland.

In addition to the priority sub-catchments listed in Table 3.11-2, the 75th percentile nitrogen leaching value dischargers will also be prioritised for Farm Environment Plans.⁸¹

Policy 9: Sub-catchment (including edge of field) mitigation planning, co-ordination and funding/Te Kaupapa Here 9: Te whakarite mahi whakangāwari, mahi ngātahi me te pūtea mō te riu kōawāwa (tae atu ki ngā taitapa)

Take a prioritised and integrated approach to sub-catchment water quality management by undertaking sub-catchment planning, and use this planning to support actions including edge of field mitigation measures. Support measures that efficiently and effectively contribute to water quality improvements. This approach includes:

⁷⁴ Jack Farms PC1-8026, H and S Brooks PC1-84, Sieling Farms PC1-5465

⁷⁵ Federated Farmers PC1-10823

⁷⁶ DairyNZ PC1-10229

⁷⁷ FANZ PC1-9789

⁷⁸ *Future mechanisms for allocation based on land suitability will consider the following criteria:*

- a) *The biophysical properties of the land that determine productive potential and susceptibility to contaminant loss (e.g. slope, soil type, drainage class, and geology); and*
- b) *the local climate regime that determines productive potential and the likelihood of water storage and runoff patterns (e.g. frost, rainfall and its seasonal distribution); and*
- c) *The natural capacity of the landscape to attenuate contaminant loss; and*
- d) *the Objective 1 water quality limits^Δ related to nitrogen, phosphorus, microbial pathogens and sediment for the surface waters that the land is hydrologically connected to; and*
- e) *the desired values^Δ in those receiving waters (ecological and human health) and how they are influenced by the four contaminants.*

The future weightings are to be determined.

For the avoidance of doubt, land suitability criteria exclude current land use and current water quality, the moderating effects of potential mitigations, and non-biophysical criteria (economic, social and cultural). Instead these factors will be of importance in analysing the implications of a completed land suitability classification.

⁷⁹ Jack Farms PC1-8026, H and S Brooks PC1-84, Sieling Farms PC1-5465

⁸⁰ Ravensdown PC1-10119

⁸¹ Fonterra PC1-10489 (consequential to option to add dairy farming)

- a. Engaging early with tangata whenua and with landowners, communities, local authorities⁸² and potential funding partners in sub-catchments in line with the priority areas listed in Table 3.11-2; and
- b. Assessing the reasons for current water quality and sources of contaminant discharge, at various scales in a sub-catchment; and
- c. Encouraging cost-effective mitigations where they have the biggest effect on improving water quality; and
- d. Allowing, where multiple ~~properties farming enterprises~~ contribute to a mitigation, for the resultant reduction in diffuse discharges to be apportioned to each ~~property enterprise~~ in accordance with their respective contribution to the mitigation and their respective responsibility for the ongoing management of the mitigation, provided that the reduction can be confidently secured for the duration of any resource consent⁸³; and-
- e. Using sub-catchment monitoring information to measure progress toward the freshwater objectives across the whole of each FMU.⁸⁴

Policy 9A: Managing multiple properties or a sub-catchment/

Enable the management of multiple properties, under single or multiple ownership, under a single resource consent or related resource consents where:

- a. Overall there is a reduction in diffuse discharges to at least the same extent that would be required if all the properties were managed individually;
- b. The resource consent application responds to the water quality improvements required in each sub-catchment;
- c. Where the properties are in separate ownership, impose conditions or require a legally binding instrument between the consent holder and each property, to ensure (a) above is achieved;
- d. Review conditions are imposed to enable ongoing management of adverse effects.⁸⁵

Policy 10: Provide for point source discharges of regional significance/Te Kaupapa Here 10: Te whakatau i ngā rukenga i ngā pū tuwha e noho tāpua ana ki te rohe

When ~~considering~~ deciding resource consent applications for point source discharges of nitrogen, phosphorus, sediment and microbial pathogens to water or onto or into land, recognise the benefits of⁸⁶ ~~provide for~~ the:

- a. Continued operation of regionally significant infrastructure; and
- b. Continued operation of regionally significant industry.

Policy 11: Application of Best Practicable Option and mitigation or offset of effects⁸⁷ to point source discharges/Te Kaupapa Here 11: Te whakahāngai i te Kōwhiringa ka Tino Taea me ngā mahi whakangāwari pānga; te karo rānei i ngā pānga ki ngā rukenga i ngā pū tuwha

Require any person undertaking a point source discharge of nitrogen, phosphorus, sediment or microbial pathogens to water or onto or into land in the Waikato and Waipā River catchments to, as a minimum,⁸⁸ adopt the Best Practicable Option* to avoid or mitigate the adverse effects of the discharge, ~~at the time a resource consent application is decided~~⁸⁹.

Policy 11A: Mitigation or offset of effects to point source discharges/⁹⁰

Where ~~it is not practicable to avoid or mitigate all any~~⁹¹ adverse effects, ~~cannot be reasonably avoided or mitigated~~ an offset measure ~~may may~~ be proposed in an alternative location or locations to the point source discharge, to ensure that there is a net for the purpose of ensuring positive effects on the environment, to lessen any residual adverse effects of the discharge(s) that will or may result from allowing the activity provided that the:

⁸² Matamata-Piako District Council PC1-3503, Waitomo District Council PC1-10323

⁸³ DoC PC1-10671

⁸⁴ Federated Farmers V1PC1-234

⁸⁵ Beef and Lamb PC1-11493, HortNZ PC1-11078

⁸⁶ P McLean PC1-11888

⁸⁷ Fonterra PC1-10601

⁸⁸ BT Mining PC1-9924

⁸⁹ Tangata Whenua – Waikato and Waipa River Iwi PC1-3349

⁹⁰ Fonterra PC1-10601

⁹¹ DoC PC1-10694

- a. Primary discharge does not result in any significant or⁹² toxic adverse effect at the point source discharge location; and
- b. Offset measure is for the same contaminant; and
- c. Offset measure occurs preferably within the same sub-catchment in which the primary discharge occurs and if this is not practicable, then within the same Freshwater Management Unit[^] or a Freshwater Management Unit[^] located upstream, and
- d. Offset measure remains in place for the duration of the consent and is secured by consent condition or another legally binding instrument⁹³.

Policy 12: ~~Additional considerations for~~ Considering point source discharges in relation to water quality targets/Te Kaupapa Here 12: He take anō hei whakaaro ake mō ngā rukenga i ngā pū tuwha e pā ana ki ngā whāinga ā-kounga wai

When deciding a resource consent application, cConsider⁹⁴ the contribution made by a point source discharge to the nitrogen, phosphorus, sediment and microbial pathogen catchment loads and the impact of that contribution on the likely⁹⁵ achievement of the short term water quality attribute states[^] targets[^] in Table 3.11-1~~Objective 3~~ or the progression towards the 80-year water quality attribute states[^] targets[^] in ~~Objective 4~~Table 3.11-1⁹⁶, taking into account:

- a. The relative proportion of nitrogen, phosphorus, sediment or microbial pathogens that the particular point source discharge contributes to the catchment load; and
- b. Past ~~technology~~ upgrades undertaken to ~~model, monitor and~~⁹⁷ reduce the discharge of nitrogen, phosphorus, sediment or microbial pathogens within the previous consent term; and
- c. ~~The ability~~Whether it is appropriate to stage future mitigation actions to allow investment costs to be spread over time and ~~to~~⁹⁸ meet the water quality attribute states[^] targets[^] specified above; ~~and~~
- d. ~~The diminishing return on investment in treatment plant upgrades in respect of any resultant reduction in nitrogen, phosphorus, sediment or microbial pathogens when treatment plant processes are already achieving a high level of contaminant reduction through the application of the Best Practicable Option*.~~⁹⁹

Policy 13: Point sources consent duration/Te Kaupapa Here 13: Te roa o te tukanga tono whakaaetanga mō te pū tuwha

When determining an appropriate duration for any point source discharge¹⁰⁰ consent granted consider the following matters, in priority to those matters addressed by Policy 6 of Chapter 1:

- a. ~~The appropriateness of a longer consent duration~~ A consent term ~~exceeding 25 years~~, where the applicant demonstrates that the discharge is consistent with achieving short-term water quality attribute states set out in Table 3.11-1, and at least a 'straight-line' toward the 80-year water quality attribute states set out in Table 3.11-1 the approaches set out in Policies 11 and 12 will be met¹⁰¹; and
- b. The magnitude and significance of the investment made or proposed to be made in contaminant reduction measures and any resultant improvements in the receiving water quality; and
- c. The need to provide appropriate certainty of investment where contaminant reduction measures are proposed (including investment in treatment plant upgrades or land based application technology).

Policy 14: Lakes Freshwater Management Units/Te Kaupapa Here 14: Ngā Wae Whakahaere Wai Māori i ngā Roto

Restore and protect lakes by 2096 through the implementation of a tailored lake-by-lake approach, guided by Lake Catchment Plans prepared over the next 10 years, which will include collecting and using data and information, and

⁹² Fish & Game PC1-10887

⁹³ GBC Winstone PC1-2947

⁹⁴ Hamilton CC PC1-10843

⁹⁵ Tangata Whenua – Waikato and Waipa River Iwi PC1-3353

⁹⁶ Fonterra PC1-10609

⁹⁷ Hamilton CC PC1-10843

⁹⁸ Fish & Game PC1-10888

⁹⁹ Tangata Whenua – Waikato and Waipa River Iwi PC1-3353

¹⁰⁰ Mercury PC1-9577

¹⁰¹ Forest & Bird PC1-8325

specifying additional matters to be included in Farm Environment Plans¹⁰² to support improve the management of land use¹⁰³ activities in the catchments of lakes Freshwater Management Units¹⁰⁴.

Policy 14A: Cross Boundary Contaminant Movement/¹⁰⁵

Impose additional limitations and controls on diffuse and point-source discharges where contaminants are likely to move out of the Waikato and Waipā River Catchments and could affect other freshwater bodies, to enable the outcomes of other relevant planning frameworks to be met.

Policy 15: Whangamarino Wetland/Te Kaupapa Here 15: Ngā Repo o Whangamarino

Protect and make progress towards restoration of Whangamarino Wetland by reducing both the point source and diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens in the sub-catchments that flow into the wetland by ~~te:~~

- a. Minimising Reduce and minimise further loss of the bog ecosystem; and
- b. Provide increasing the availability of mahinga kai; and
- c. Implementing the Support implementation of any catchment plan prepared in future by Waikato Regional Council that covers Whangamarino Wetland; and-
- d. Supporting research and testing of restoration tools and options, including advice and funding to maintain and enhance the health of wetlands; and
- e. Protect the significant values and ecosystem health of the wetland system; and
- f. Recognising the impacts of pest fish and weed; and
- g. Recognise the hydrological drivers that affect water quality.¹⁰⁶

Policy 16: Flexibility for development of land returned under Te Tiriti o Waitangi settlements and multiple owned Māori land/Te Kaupapa Here 16: Te hangore o te tukanga mō te whakawhanaketanga o ngā whenua e whakahokia ai i raro i ngā whakataunga kokoraho o Te Tiriti o Waitangi me ngā whenua Māori kei raro i te mana whakahaere o te takitini

For the purposes of considering land use change applications under Rule 3.11.5.7, land use change that enables the development of tangata whenua ancestral lands shall be managed in a way that recognises and provides for:

- a. The relationship of tangata whenua with their ancestral lands; and
- b. The exercise of kaitiakitanga; and
- c. The creation of positive economic, social and cultural benefits for tangata whenua now and into the future;

Taking into account:

- i. Best management practice actions for nitrogen, phosphorus, sediment and microbial pathogens for the proposed new type of land use; and
- ii. The suitability of the land for development into the proposed new type of land use, ~~reflecting the principles for future allocation as contained in Policy 7,¹⁰⁷~~ including the risk of contaminant discharge from that land and the sensitivity of the receiving water body; and
- iii. The short term water quality attribute states targets¹⁰⁸ to be achieved in Objective 3.

Policy 17: Considering the wider context of Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy/Te Kaupapa Here 17: Te whakaaro ake ki te horopaki whānui o Te Ture Whaimana

When applying policies and methods in Chapter 3.11, seek opportunities to advance those matters in Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy and the values¹⁰⁹ for the Waikato and Waipā Rivers that relate to water quality outcomes but are not confined to the management of nitrogen, phosphorus, sediment and microbial contaminants fall

¹⁰² DoC PC1-10753

¹⁰³ Tangata Whenua – Waikato and Waipa River Iwi PC1-3404

¹⁰⁴ DoC PC1-10465

¹⁰⁵ WRC V1PC1-211

¹⁰⁶ DoC V1PC1-405, Fish & Game V1PC1-261

¹⁰⁷ Jack Farms PC1-8026, H and S Brooks PC1-84, Sieling Farms PC1-5465

¹⁰⁸ Fonterra PC1-10451

outside the scope of Chapter 3.11, but could be considered secondary benefits of methods carried out under this Chapter¹⁰⁹, including, but not limited to:

- a. Opportunities to enhance biodiversity, wetland values[^] and the functioning of ecosystems; and
- b. Opportunities to enhance access and recreational values[^] associated with the rivers.

3.11.4—Implementation methods/Ngā tikanga whakatinana

3.11.4.1—Working with others/Te mahi tahi me ētehi atu

Waikato Regional Council will work with stakeholders including Waikato River iwi partners, Waikato River Authority, Waikato River Restoration Strategy partners, Department of Conservation, territorial authorities, industry and sector bodies, to implement Chapter 3.11 including all the following methods in 3.11.4. This will include coordinating priorities, funding and physical works, promoting awareness and providing education, to assist in giving effect to the *Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato* for the Waikato and Waipā Rivers.

3.11.4.2—Certified Industry Scheme/Te kaupapa ā-ahumahi kua whai tohu

Waikato Regional Council will develop an industry certification process for industry bodies as per the standards outlined in Schedule 2. The **Certified Industry Scheme** will include formal agreements between parties. Agreements will include:

- a. Provision for management of the **Certified Industry Schemes**;
- b. Oversight, and monitoring of **Farm Environment Plans**;
- c. Information sharing;
- d. Aggregate reporting on **Certified Industry Scheme** implementation; and
- e. Consistency across the various **Certified Industry Schemes**

3.11.4.3—Farm Environment Plan/Ngā Mahere Taiao ā-Pāmu

Waikato Regional Council will prepare parameters and minimum requirements for the development of a certification process for professionals to develop, certify and monitor **Farm Environment Plans** in a consistent approach across the region. A **Farm Environment Plan** will be prepared by a certified person as per the requirements outlined in Schedule 1, and will assess the risk of **diffuse discharges** of nitrogen, phosphorus, sediment and **microbial pathogens** and specify actions to reduce those risks in order to bring about reductions in the discharges of those contaminants. Waikato Regional Council will develop guidance for risk assessments, auditing and compiling **Farm Environment Plans**.

Waikato Regional Council will take a risk based approach to monitoring **Farm Environment Plans**, starting with more frequent monitoring and then moving to monitoring based on risk assessment. Robust third party audit (independent of the farmer and **Certified Farm Environment Planner**) and monitoring will be required.

3.11.4.4—Lakes and Whangamarino Wetland/Ngā Roto me ngā Repo o Wangamarino

Waikato Regional Council, working with others, will:

- a. Build on the Shallow Lakes Management Plan by developing Lake Catchment Plans and investigate lake specific options to improve water quality and ecosystem health, and manage pest species. In many instances, this may require an adaptive management approach.
- b. Prepare and implement Lake Catchment Plans with community involvement which include:
 - i. A vision for the lake developed in consultation with the community.
 - ii. Description of the desired state of lake and recognition of the challenges (e.g. costs) and opportunities (e.g. benefits) in achieving it.
 - iii. An evidence based description of the problem (i.e. what is the gap between the current state and desired state) that recognises the presence of multiple stressors and uncertainty in responses and time frames.
 - iv. Community engagement in defining actions that will move the lake towards its desired state.
 - v. Responsibility for achieving the agreed actions and expected timeframes, developed in consultation with those who will be undertaking the work.
 - vi. A monitoring regime that will provide evidence of the implementation of the defined actions and any changes in the state of the lake.
- c. As a priority, undertake the development and implementation of the Lake Waikare and Whangamarino Wetland Catchment Management Plan using the process set out in b).
- d. Work towards managing the presence of pest weeds and fish in the shallow lakes and connected lowland rivers area, including Whangamarino Wetland.

¹⁰⁹ DoC PC1-10746 and Fish and Game PC1-10906

- e. Support research and testing of restoration tools and options to maintain and enhance the health of shallow lakes and Whangamarino Wetland (e.g. lake modelling, lake bed sediment treatments, constructed wetlands, floating wetlands, silt traps, pest fish management, and farm system management tools).
- f. Support lake and Whangamarino Wetland restoration programmes including, but not limited to, advice, funding, and project management. Restoration programmes may have a wider scope than water quality, including hydrological restoration, revegetation and biodiversity restoration.
- g. Develop a set of 10-year water quality attribute^Δ targets^Δ for each lake Freshwater Management Unit^Δ.

3.11.4.5 Sub-catchment scale planning/Te whakamāherehere mō te whānuitanga o ngā riu kōawaawa

Waikato Regional Council will work with others to develop **sub-catchment** scale plans (where a catchment plan does not already exist) where it has been shown to be required. **Sub-catchment** scale planning will:

- a. Identify the causes of current water quality decline, identify cost effective measures to bring about reductions in contaminant discharges, and coordinate the reductions required at a **property, enterprise** and **sub-catchment** scale (including recommendations for funding where there is a public benefit identified).
- b. Align works and services to reduce nitrogen, phosphorus, sediment and **microbial pathogen** discharges including riparian management, targeted reforestation, constructed wetlands, sediment traps and sediment detention bunds.
- c. Assess and determine effective and efficient placement of constructed wetlands at a **sub-catchment** scale to improve water quality.
- d. Support research that addresses the management of wetlands, including development of techniques to monitor ecological change and forecasting evolution of wetland characteristics resulting from existing land use in the wetland catchments.
- e. Integrate the regulatory requirements to fence waterways with the requirements for effective drainage scheme management.
- f. Coordinate funding of mitigation work by those contributing to water quality degradation, in proportion to that contribution.
- g. Utilise public funds to support **edge of field mitigations** where those mitigations provide significant public benefit.

3.11.4.6 Funding and implementation/Te pūtea me te whakatinanatanga

Waikato Regional Council will:

- a. Provide staff resources and leadership within the organisation for the implementation of Chapter 3.11.
- b. Seek to secure funding for the implementation of Chapter 3.11 through the annual plan and long term plan processes.

3.11.4.7 Information needs to support any future allocation/Ngā pārongo e hiahiatia ana hei taunaki i ngā tohanga o anamata

Gather information and commission appropriate scientific research to inform any future framework for the allocation of diffuse discharges including:

- a. Implementing processes that will support the setting of property or enterprise-level diffuse discharge limits in the future.
- b. Researching:
 - i. The quantum of contaminants that can be discharged at a sub-catchment and Freshwater Management Unit^Δ scale while meeting the Table 3.11-1 water quality attribute^Δ targets^Δ.
 - ii. Methods to categorise and define 'land suitability'.
 - iii. Tools for measuring or modelling discharges from individual properties, enterprises and sub-catchments, and how this can be related to the Table 3.11-1 water quality attribute^Δ targets^Δ.

3.11.4.8 Reviewing Chapter 3.11 and developing an allocation framework for the next Regional Plan/Te arotake i te Upoko 3.11, te whakarite hoki i tētehi anga toha mō te Mahere ā Rohe e whai ake ana

Waikato Regional Council will:

- a. Develop discharge allocation frameworks for individual **properties** and **enterprises** based on information collected under Method 3.11.4.7, taking into account the best available data, knowledge and technology at the time; and
- b. Use this to inform future changes to the Waikato Regional Plan to manage discharges of nitrogen, phosphorus, sediment and **microbial pathogens** at a **property** or **enterprise** level to meet the targets^Δ in the Objectives.

3.11.4.9 Managing the effects of urban development/Te whakahaere i ngā pānga o te whanaketanga ā tāone

Waikato Regional Council will:

- a. Continue to work with territorial authorities to implement the Waikato Regional Policy Statement set of principles that guide future development of the built environment which anticipates and addresses cumulative effects over the long term.
- b. When undertaking sub-catchment scale planning under Method 3.11.4.5 in urban sub-catchments engage with urban communities to raise awareness of water quality issues, and to identify and implement effective solutions for the urban context.

3.11.4.10 Accounting system and monitoring/Te pūnaha kaute me te aroturuki

Waikato Regional Council will establish and operate a publicly available accounting system and monitoring in each Freshwater Management Unit^Δ, including:

- a. Collecting information on nitrogen, phosphorus, sediment and **microbial pathogen** levels in the respective fresh water bodies in each Freshwater Management Unit^Δ from:
 - i. Council's existing river monitoring network; and
 - ii. **Sub-catchments** that are currently unrepresented in the existing monitoring network; and
 - iii. Lake Freshwater Management Units^Δ.
- b. Using the information collected to establish the baseline data for compiling a monitoring plan and to assess progress towards achieving the Table 11-1 water quality attribute^Δ targets^Δ; and
- c. Using state of the environment monitoring data including biological monitoring tools such as the Macroinvertebrate Community Index to provide the basis for identifying and reporting on long term trends; and
- d. An information and accounting system for the **diffuse discharges** from **properties** and **enterprises** that supports the management of nitrogen, phosphorus, sediment and **microbial pathogens diffuse discharges** at an **enterprise or property** scale.

3.11.4.11 Monitoring and evaluation of the implementation of Chapter 3.11/Te aroturuki me te arotake i te whakatīmanatanga o te Upoko 3.11

Waikato Regional Council will:

- a. Review and report on the progress towards and achievement of the 80-year water quality objectives of Chapter 3.11.
- b. Research and identify methods to measure actions at a **sub-catchment, property** and **enterprise** level, and their contribution to reductions in the discharge of contaminants.
- c. Monitor the achievement of the values^Δ for the Waikato and Waipā Rivers and the uses made of those rivers.
- d. Collate data on the number of land use resource consents issued under the rules of this chapter, the number of **Farm Environment Plans** completed, compliance with the actions listed in **Farm Environment Plans, Nitrogen Reference Points** for **properties** and **enterprises**, and nitrogen discharge data reported under **Farm Environment Plans**.
- e. Work with industry to collate information on the functioning and success of any **Certified Industry Scheme**.

3.11.4.12 Support research and dissemination of best practice guidelines to reduce diffuse discharges/Te taunaki i te rangahautanga me te tuaritanga o ngā aratohu mō ngā mahi tino whai take hei whakaiti i ngā rukenga roha

Waikato Regional Council will:

- a. Develop and disseminate **best management practice** guidelines for reducing the **diffuse discharges** of nitrogen, phosphorus, sediment and **microbial pathogens**; and
- b. Support research into methods for reducing **diffuse discharges** of contaminants to water.¹¹⁰

¹¹⁰ Fish and Game PC1-10910, J and A Gaston PC1-1083

3.11.5 Rules/Ngā Ture

3.11.5.1 Permitted Activity Rule – Small and Low Intensity farming activities/Te Ture mō ngā Mahi e Whakaaetia ana – Ngā mahi iti, ngā mahi pāiti hoki i runga pāmu

Rule 3.11.5.1 - Permitted Activity Rule – Small and Low Intensity farming activities

The use of land for farming activities (excluding commercial vegetable production) and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens into water or onto or into land in circumstances which may result in those contaminants entering water is a permitted activity subject to the following conditions:

1. The property is registered with the Waikato Regional Council if required by and in conformance with Schedule A; and
2. Farming is undertaken in conformance with the minimum farming standards in schedule C Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C¹¹¹; and

Either

- 2A. No commercial vegetable production occurs¹¹²; and
- 2B. No dairy farming or grazing of dairy cattle occurs¹¹³; and
- 2C. No feedlots or sacrifice paddocks are used on the property; and
- 2D. No more than 5% of the land used for farming is used for cropping, including winter forage crops. No arable cropping occurs; and¹¹⁴
- 2E. There has been less than a cumulative net total of 4.1 hectares of change in the use of land from that which was occurring at 22 October 2016 within a property from woody vegetation to farming¹¹⁵; and
- 2F. Upon request, the landowner shall obtain and provide to the Waikato Regional Council independent verification from a Certified Farm Environment Planner that the use of land is compliant with the conditions of this Rule within 20 working days of the request (unless otherwise agreed in writing by the Waikato Regional Council); and¹¹⁶
3. The property area is less than or equal to 4.1 hectares; and¹¹⁷
4. The farming occurs on a single property. The farming activities do not form part of an enterprise being undertaken on more than one property¹¹⁸; and

Where the property area is greater than 4.1 hectares;¹¹⁹

5. The property area is less than or equal to 20 hectares or, if greater than 20 hectares then:¹²⁰
 - a. For grazed land, the stocking rate of the land is less than 6 stock units per hectare; and or
 - b. For at least 9 months in any 12 month period, more than 75% of the stock units on the property are horses¹²¹; or
 - c. The property is used only for low intensity horticulture; or¹²²
 - d. The property is used only for free range poultry;¹²³

3.11.5.1A Interim Permitted Activity Rule – Farming

Rule 3.11.5.1A – Interim Permitted Activity Rule – Farming

The use of land for farming and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens into water or onto or into land in circumstances which may result in those contaminants entering water, which is not a permitted activity under Rule 3.11.5.1, is a permitted activity until the Application Date specified in Table 3.11-2, subject to the following conditions:

1. The property is registered with the Waikato Regional Council in conformance with Schedule A; and

¹¹¹ Federated Farmers V1PC1-327

¹¹² I D Kerr PC1-4720

¹¹³ A & A Juno PC1-818

¹¹⁴ J Alcock and J Easton PC1-9217, L Ashton PC1-7032, G Gleeson PC1-6410

¹¹⁵ I D Kerr PC1-4720

¹¹⁶ Shifted from within the rule ((3)(c)).

¹¹⁷ C G McGregor PC1-6652, L Aston PC1-7032

¹¹⁸ WRC PC1-3420

¹¹⁹ Oji Ltd PC1-8081

¹²⁰ L Aston PC1-7032, P J Hurley PC1-1088

¹²¹ R A Cave PC1-3900, T Wilde PC1-613

¹²² Hort NZ PC1-10116, T A Reynolds Ltd PC1-8262

¹²³ H R Oatway PC1-6524, J & J Alcock and Easton PC1-9217

2. Farming is undertaken in conformance with the minimum farming standards in Schedule C Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and¹²⁴
3. A Nitrogen Reference Point is produced for the property if required by and in conformance with Schedule B; and
4. Full electronic access to any software or system that models or records diffuse contaminant losses for the farming authorised by this rule is granted to the Waikato Regional Council, and if requested, any specified OverseerFM analysis is provided to the Waikato Regional Council; and¹²⁵
5. There has been less than a cumulative net total of 4.1 hectares of change in the use of land from that which was occurring at 22 October 2016 within a property or enterprise from:
 1. Woody vegetation to farming; or
 2. Any farming other than dairy farming to dairy farming; or
 3. Any farming other than commercial vegetable production to commercial vegetable production¹²⁶

3.11.5.2 Permitted Activity Rule—Other farming activities/Te Ture mō ngā Mahi e Whakaetia ana—Ētehi atu mahi i runga pāmu¹²⁷

Rule 3.11.5.2 Permitted Activity Rule—Other farming activities

The use of land for farming activities (excluding commercial vegetable production) and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water where the property area is greater than 4.1 hectares, and has more than 6 stock units per hectare or is used for arable cropping,¹²⁸ is a permitted activity subject to the following conditions:

1. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
2. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C and Conditions 3(e) and 4(e) of this Rule; and
3. Where the property area is less than or equal to 20 hectares:
 - a. The farming activities do not form part of an enterprise being undertaken on more than one property; and
 - b. Where the land is:
 - i. used for grazing livestock, the stocking rate of the land is no greater than the stocking rate of the land at 22 October 2016; or
 - ii. not used for grazing livestock, the land use has the same or lower diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens as the land use at 22 October 2016; and
 - c. Upon request, the landowner shall obtain and provide to the Council independent verification from a Certified Farm Environment Planner that the use of land is compliant with either b)(i) or b)(ii) above; and
 - d. Upon request from the Council, a description of the current land use activities shall be provided to the Council; and
 - e. Where the property or enterprise contains any of the water bodies listed in Schedule C, new fences installed after 22 October 2016 must be located to ensure cattle, horses, deer and pigs cannot be within three metres of the bed of the water body (excluding constructed wetlands and drains).¹²⁹
4. Where the property or enterprise area is greater than 20 hectares:
 - a. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and
 - b. The diffuse discharge of nitrogen from the property or enterprise does not exceed either:
 - i. the Nitrogen Reference Point; or
 - ii. 15kg nitrogen/hectare/year; whichever is the lesser, over the whole property or enterprise when assessed in accordance with Schedule B; and¹³⁰
 - c. No part of the property or enterprise over 15 degrees slope is cultivated or grazed; and
 - d. No winter forage crops are grazed in situ; and
 - e. Where the property or enterprise contains any of the water bodies listed in Schedule C:
 - i. There shall be no cultivation within 5 metres of the bed of the water body; and
 - ii. New fences installed after 22 October 2016 must be located to ensure cattle, horses, deer and pigs cannot be within three metres of the bed of the water body (excluding constructed wetlands and drains); and¹³¹
5. For all properties greater than 4.1 hectares, from 31 March 2019, in addition to the requirements of Schedule A, the following information must be provided to the Waikato Regional Council by 1 September each year:

¹²⁴ Federated Farmers V1PC1-327

¹²⁵ WRC V1PC1-218

¹²⁶ Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

¹²⁷ P Nichol PC1-689

¹²⁸ Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

¹²⁹ P Hurley PC1-1088, Federated Farmers V1PC1-338

¹³⁰ Fonterra V1PC1-765, Balle Bros Group PC1-11423, Hill Country Farmers Group PC1-7845

¹³¹ G Holmes PC1-4693, Huirimu Farms Ltd PC1-5908, A McGovern PC1-8319

- a. Annual stock numbers; and
- b. Annual fertiliser use; and
- c. Annual brought in animal feed.

3.11.5.3 Permitted Activity Rule – Farming activities with a Farm Environment Plan under a Certified Industry Scheme/Te Ture mō ngā Mahi e Whakaaetia ana – Ngā mahi i runga pāmu kua whai Mahere Taiao ā-Pāmu i raro i te Kaupapa ā-Ahumahi kua Whai Tohu

Rule 3.11.5.3 – Permitted Activity Rule – Farming activities with a Farm Environment Plan under a Certified Industry Scheme

Except as provided for in Rule 3.11.5.1 and Rule 3.11.5.2 the use of land for farming activities (excluding commercial vegetable production) where the land use is registered to a Certified Industry Scheme, and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a permitted activity subject to the following conditions:

1. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
2. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and
3. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and
4. The Certified Industry Scheme meets the criteria set out in Schedule 2 and has been approved by the Chief Executive Officer of Waikato Regional Council; and
5. A Farm Environment Plan which has been prepared in accordance with Schedule 1 and has been approved by a Certified Farm Environment Planner, is provided to the Waikato Regional Council as follows:
 - a. By 1 July 2020 for properties or enterprises within Priority 1 sub-catchments listed in Table 3.11-2, and all properties or enterprises with a Nitrogen Reference Point greater than the 75th percentile nitrogen leaching value;
 - b. By 1 July 2023 for properties or enterprises within Priority 2 sub-catchments listed in Table 3.11-2;
 - c. By 1 July 2026 for properties or enterprises within Priority 3 sub-catchments listed in Table 3.11-2; and
6. The use of land shall be undertaken in accordance with the actions and timeframes specified in the Farm Environment Plan; and
7. The Farm Environment Plan provided under Condition 5 may be amended in accordance with the procedure set out in Schedule 1 and the use of land shall thereafter be undertaken in accordance with the amended plan; and
8. A copy of the Farm Environment Plan amended in accordance with condition (7) shall be provided to the Waikato Regional Council within 30 working days of the date of its amendment.

3.11.5.4 Controlled Activity Rule – Farming activities with a Farm Environment Plan not under a Certified Industry Scheme/Te Ture mō ngā Mahi ka āta Whakahaerehia – Ngā mahi i runga pāmu kua whai Mahere Taiao ā-Pāmu kāore i raro i te Kaupapa ā-Ahumahi kua Whai Tohu

Rule 3.11.5.4 – Controlled Activity Rule – Farming activities with a Farm Environment Plan not under a Certified Industry Scheme

Except as provided for in Rule 3.11.5.1 and Rule 3.11.5.2 ~~the use of land for farming activities (excluding commercial vegetable production) where that land use is not registered to a Certified Industry Scheme,~~ and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens into water or onto or into land in circumstances which may result in those contaminants entering water, which is not a permitted activity under Rules 3.11.5.1 or 3.11.5.1A, is a controlled permitted activity until:

1. 1 January 2020 for properties or enterprises in Priority 1 sub-catchments listed in Table 3.11-2
2. 1 January 2023 for properties or enterprises in Priority 2 sub-catchments listed in Table 3.11-2;
3. 1 January 2026 for properties or enterprises in Priority 3 sub-catchments listed in Table 3.11-2;¹³²

subject to the following conditions:

1. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
2. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and
3. No commercial vegetable production occurs; and
- 3A. The use of land for farming occurs on a single property; and¹³³

¹³² Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

¹³³ WRC PC1-3420

4. A Farm Environment Plan:
 - a. has been prepared in conformance with Schedule D; and
 - b. has been approved by a Certified Farm Environment Planner as:
 - i. being in conformance with Schedule D; and
 - ii. showing actions and mitigations that demonstrate how the farming activity will achieve and maintain Good Farming Practices and that losses of nitrogen, phosphorus, and sediment will not exceed the maximum annual losses that were occurring during the reference period in Schedule B; and¹³⁴
 - c. is provided to the Waikato Regional Council at the time the resource consent application is lodged; and¹³⁵
5. Farming is undertaken in conformance with the minimum farming standards in schedule C; and¹³⁶
6. Full electronic access to any software or system that models or records diffuse contaminant losses for the farming authorised by this rule is granted to the Waikato Regional Council, and if requested, any specified OverseerFM analysis is provided to the Waikato Regional Council; and¹³⁷
7. There have been less than a cumulative net total of 4.1 hectares of change in the use of land from that which was occurring at 22 October 2016 within a property from:
 1. Woody vegetation to farming; or
 2. Any farming other than dairy farming to dairy farming.

After the dates set out in 1), 2) and 3) above the use of land shall be a controlled activity (requiring resource consent), subject to the following standards and terms:

- a. ~~A Farm Environment Plan has been prepared in conformance with Schedule 1 and has been approved by a Certified Farm Environment Planner, and is provided to the Waikato Regional Council at the time the resource consent application is lodged by the dates specified in I-III below; and~~
- b. ~~The property is registered with the Waikato Regional Council in conformance with Schedule A; and~~
- c. ~~A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B and is provided to the Waikato Regional Council at the time the resource consent application is lodged; and~~
- d. ~~Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C.~~

Matters of Control

Waikato Regional Council reserves control over the following matters:

- i. ~~The content of, compliance with and auditing of the Farm Environment Plan.~~
- ii. ~~The actions and timeframes to achieve and maintain Good Farming Practices or better, or an equivalent reduction in losses, in order to for undertaking mitigation actions that maintain or reduce the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens to water or to land where they may enter water.~~
- iii. ~~The actions, timeframes and other measures to ensure that the diffuse discharge of nitrogen from the property or enterprise, as measured by the five year rolling average annual nitrogen loss as determined by the use of the current version of OVERSEER®, does not increase beyond the property or enterprise's Nitrogen Reference Point, unless other suitable mitigations are specified.~~¹³⁸
- iv. ~~Where the Nitrogen Reference Point exceeds the 75th percentile nitrogen leaching value, actions, timeframes and other measures to ensure the diffuse discharge of nitrogen is reduced so that it does not exceed the 75th percentile nitrogen leaching value by 1 July 2026.~~
- v. ~~The term duration of the resource consent.~~
- vi. ~~The monitoring, record keeping, reporting and information provision requirements for the holder of the resource consent to demonstrate and/or monitor compliance with the resource consent and Farm Environment Plan.~~
- vii. ~~The timeframe and circumstances under which the consent conditions may be reviewed or the Farm Environment Plan shall be amended.~~
- viii. ~~Procedures for reviewing, amending and re-approving the Farm Environment Plan.~~

Dates:

- I. ~~For Priority 1 sub-catchments, and properties with a Nitrogen Reference Point of greater than 75th percentile nitrogen leaching value, by 1 July 2020~~
- II. ~~For Priority 2 sub-catchments, by 1 July 2023~~
- III. ~~For Priority 3 sub-catchments, by 1 July 2026~~

Notification:

¹³⁴ J Bailey PC1-9046

¹³⁵ Previously part of rule (condition a) with addition of Certified Sector Schemes.

¹³⁶ Federated Farmers V1PC1-327

¹³⁷ WRC V1PC1-218

¹³⁸ Oji Ltd PC1-8934

Consent applications will be considered without notification, and without the need to obtain written approval of affected persons.¹³⁹

3.11.5.5 Controlled Restricted Discretionary Activity Rule – Existing commercial vegetable production/Te Ture mō ngā Mahi ka āta Whakahaerehia – Te whakatupu hua whenua ā-arumoni o te wā nei

Rule 3.11.5.5 - Controlled Restricted Discretionary Activity Rule – Existing commercial vegetable production

The use of land for commercial vegetable production and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens into water or onto or into land in circumstances which may result in those contaminants entering water, is a permitted activity until 1 January 2020, from which date it shall be a controlled restricted discretionary¹⁴⁰ activity (requiring resource consent) subject to the following conditions standards and terms:

- a. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
- b. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B ~~and provided to the Waikato Regional Council at the time the resource consent application is lodged~~; and
- c. ~~Farming is undertaken in conformance with the minimum farming standards in schedule C Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and¹⁴¹~~
- d. ~~The land use is registered to a Certified Industry Scheme; and~~
- e. The following information, relating to the land used by the applicant for commercial vegetable production each year in the period 1 July 2011 to 30 June 2016, is provided to the Council:
 - i. The total, maximum area (hectares) of land used for commercial vegetable production; and
 - ii. The maximum areas (hectares) of land and their locations, per sub-catchment [refer to Table 3.11-2]; and¹⁴²
~~The areas of land, and their locations broken down by sub-catchments [refer to Table 3.11-2], that were used for commercial vegetable production within the property or enterprise each year in the period 1 July 2006 to 30 June 2016, together with the maximum area of land used for commercial vegetable production within that period, shall be provided to the Council; and~~
- f. The total area of land within each sub-catchment for which consent is sought for commercial vegetable production must not exceed the annual maximum land area of the property or enterprise that was used for commercial vegetable production by the applicant within those sub-catchments during the period 1 July 2006 2011 to 30 June 2016; and¹⁴³
- g. ~~Where new land is proposed to be used for commercial vegetable production, an equivalent area of land must be removed from commercial vegetable production in order to comply with standard and term f; and~~
- h. A Farm Environment Plan:
 1. has been prepared in conformance with Schedule D; and
 2. has been approved by a Certified Farm Environment Planner as:
 - i. being in conformance with Schedule D; and
 - ii. showing actions and mitigations that demonstrate how the farming activity will achieve and maintain Good Farming Practices and that losses of nitrogen, phosphorus, and sediment will not exceed the maximum annual losses that were occurring during the reference period in Schedule B; and
 - c. is provided to the Waikato Regional Council at the time the resource consent application is lodged; and¹⁴⁴
- i. Full electronic access to any software or system that models or records diffuse contaminant losses for the farming authorised by this rule is granted to the Waikato Regional Council, and if requested, any specified OverseerFM analysis is provided to the Waikato Regional Council.¹⁴⁵

~~Waikato Regional Council restricts its discretion to the following matters: Matters of Control~~

~~Waikato Regional Council reserves control over the following matters:~~

- i. ~~The content and auditing of the Farm Environment Plan.~~
- ii. ~~The maximum total and per-sub-catchment area of land to be used for commercial vegetable production.~~
- iii. ~~The actions and timeframes to achieve and maintain Good Farming Practices or better and any relevant minimum standards to avoid exceeding baseline losses, for undertaking mitigation actions that maintain or reduce the diffuse discharge of nitrogen, phosphorus or sediment to water or to land where those contaminants may enter water,~~

¹³⁹ Forest and Bird PC1-8208

¹⁴⁰ Forest & Bird PC1-8211

¹⁴¹ Federated Farmers V1PC1-327

¹⁴² WRC PC1-3444

¹⁴³ WRC PC1-3444

¹⁴⁴ C & J Alcock PC1-2185

¹⁴⁵ WRC V1PC1-218

including provisions to manage the effects of land being retired from commercial vegetable production and provisions to achieve Policy 3(d).

- iv. ~~The actions and timeframes to ensure that the diffuse discharge of nitrogen does not increase beyond the Nitrogen Reference Point for the property or enterprise.~~
- iva. The effects, including cumulative effects, of diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens.
- ivb. The nature and timing of any reductions in diffuse discharges.
- v. ~~The duration term of the resource consent.~~
- vi. ~~The monitoring, record keeping, reporting, contaminant accounting and information provision requirements for the holder of the resource consent to demonstrate and/or monitor compliance with the resource consent and the Farm Environment Plan.~~
- vii. ~~The time frame and circumstances under which the resource consent conditions may be reviewed.~~
- viii. ~~Procedures for reviewing, amending and re-certifying the Farm Environment Plan.~~
- ix. The procedures and limitations, including Nitrogen Reference Points, to be applied to land that leaves the commercial vegetable growing activities. ¹⁴⁶

Notification:

Consent applications will be considered without public notification, ~~and without the need to obtain written approval of affected persons.~~

~~**Advisory note:** Under section 20A(2) of the RMA a consent must be applied for within 6 months of 1 January 2020, namely by 1 July 2020.~~

~~3.11.5.6 Restricted Discretionary Activity Rule – The use of land for farming activities/Te Ture mō ngā kōwhiringa mahi e herea ana – te whakamahinga o te whenua mō ngā mahinga pāmu~~

~~Rule 3.11.5.6 – Restricted Discretionary Activity Rule – The use of land for farming activities~~

~~The use of land for farming activities that does not comply with the conditions, standard or terms of Rules 3.11.5.1 to 3.11.5.5 and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a restricted discretionary activity (requiring resource consent)~~

~~Waikato Regional Council restricts its discretion over the following matters:~~

- ~~i. Cumulative effects on water quality of the catchment of the Waikato and Waipā Rivers.~~
- ~~ii. The diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens.~~
- ~~iii. The need for and the content of a Farm Environment Plan.~~
- ~~iv. The term of the resource consent.~~
- ~~v. The monitoring, record keeping, reporting and information provision requirements for the holder of the resource consent.~~
- ~~vi. The time frame and circumstances under which the consent conditions may be reviewed.~~
- ~~vii. The matters addressed by Schedules A, B and C.~~

Notification:

~~Consent applications will be considered without notification, and without the need to obtain written approval of affected persons.~~

3.11.5.6A Discretionary Activity Rule

Rule 3.11.5.6A - Discretionary Activity Rule

The use of land for farming that does not meet one or more of the conditions of Rule 3.11.5.4 or Rule 3.11.5.5, other than condition (7) of Rule 3.11.5.4 or condition (f) of Rule 3.11.5.5, and the associated diffuse discharge of nitrogen, phosphorus,

¹⁴⁶ G and J Jeffries PC1-7240, K McLaughlin PC1-6018, Moerangi Trust PC1-4279, PLUG PC1-11178

sediment and microbial pathogens into water or onto or into land in circumstances which may result in those contaminants entering water is a discretionary activity.¹⁴⁷

3.11.5.7 Non-Complying Activity Rule —~~Land Use Change~~/Te Ture mō ngā mahi kāore e whai i ngā ture – Te Panonitanga ā-Whakamahinga Whenua

Rule 3.11.5.7 - Non-Complying Activity Rule —~~Land Use Change~~

The use of land for farming that does not meet condition (7) of Rule 3.11.5.4 or condition (f) of Rule 3.11.5.5 and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens into water or onto or into land in circumstances which may result in those contaminants entering water is a non-complying activity.¹⁴⁸

~~Notwithstanding any other rule in this Plan, any of the following changes in the use of land from that which was occurring at 22 October 2016 within a property or enterprise located in the Waikato and Waipā catchments, where prior to 1 July 2026 the change exceeds a total of 4.1 hectares:~~

- ~~1. Woody vegetation to farming activities; or~~
- ~~2. Any livestock grazing other than dairy farming to dairy farming; or~~
- ~~3. Arable cropping to dairy farming; or~~
- ~~4. Any land use to commercial vegetable production except as provided for under standard and term g. of Rule 3.11.5.5 is a non-complying activity (requiring resource consent) until 1 July 2026.~~

Notification:

~~Consent applications will be considered without notification, and without the need to obtain written approval of affected persons, subject to the Council being satisfied that the loss of contaminants from the proposed land use will be lower than that from the existing land use.]~~¹⁴⁹

¹⁴⁷ Fonterra PC1-10506

¹⁴⁸ Fonterra V1PC1-757, Waipā DC PC1-3249, Waitomo DC PC1-10312

¹⁴⁹ Forest and Bird PC1-8214

3.11.6 Schedules

Schedule A - Registration with Waikato Regional Council/Te Āpitiwhanga A – Te rēhita me te Kaunihera ā-Rohe o Waikato

Properties with an area greater than ~~2 hectares~~ 4.1 hectares¹⁵⁰ (excluding urban properties)¹⁵¹ must be registered with the Waikato Regional Council in the following manner:

- ~~1. Registration must occur between 1 September 2018 and 31 March 2019.~~¹⁵²
2. Registration information set out in clause 5, and where relevant in clause 6, below must be provided.
3. Proof of registration must be provided to the Waikato Regional Council within 7 working days of a request by to the Waikato Regional Council being made if requested by the Council.¹⁵³
4. Registration information must be updated by the new owner of a property within 30 working days of the new owner taking possession of the property, or otherwise at the request of the Waikato Regional Council.
5. All ~~property~~ owners must provide:
 - a. The following information in respect of the ~~land~~ property¹⁵⁴ owner, and the person responsible for using the land (if different from the ~~land~~ property owner):
 - i. Full name.
 - ii. Trading name (if applicable, where the owner is a company or other entity).
 - iii. Full postal and email address.
 - iv. Telephone contact details.
 - b. ~~Legal description of the property as per the~~ and certificate(s) of title references (computer freehold registers) for all of the land in the property.¹⁵⁵
 - c. Physical address of the property.
 - d. A description of the land use activity or activities undertaken on the property as at 22 October 2016, including the land area of each activity.
 - e. The total land area of the property.
 - f. Where the land is used for grazing, the stocking rate of animals grazed on the land as at 22 October 2016 and at the date of registration.
 - g. If more than one property is farmed as part of a group, the addresses and owners of the other properties and the name of that group.¹⁵⁶
6. Properties that graze livestock must also provide a map showing:
 - ~~a. The~~ The location of:
 - i. Property boundaries; and
 - ii. Water bodies listed in Schedule C for stock exclusion within the property boundary and fences adjacent to those water bodies; and
 - iii. Livestock crossing points over those water bodies and a description of any livestock crossing structures.

¹⁵⁰ WRC PC1-3536

¹⁵¹ R A Carey PC1-3130

¹⁵² Oji Ltd V1PC1-457

¹⁵³ WRC PC1-3536

¹⁵⁴ WRC PC1-3536

¹⁵⁵ Waipa DC PC1-3225

¹⁵⁶ Waipa DC PC1-3225

Schedule B - Nitrogen Reference Point/Te Āpiti hanga B – Te tohu ā-hauota

Any property with a total area greater than 20 hectares, where any part of that property is used for farming, ~~A property or enterprise with a cumulative area greater than 20 hectares (or any property or enterprise that is used for commercial vegetable production)~~ must have a Nitrogen Reference Point calculated as follows:

- a. ~~The Nitrogen Reference Point must be calculated~~ determined by a Certified Farm Nutrient Advisor ~~to determine based on the amount of nitrogen being leached from the property or enterprise during the relevant reference period specified in clause f), except that for any land use change approved under Rules 3.11.5.6 or 3.11.5.7 where the Nitrogen Reference Point shall be determined through the resource Rule 3.11.5.7 consent process.~~
- b. ~~The Nitrogen Reference Point shall be the highest modelled annual nitrogen leaching loss that occurred during a single year (being 12 consecutive months) within the reference period specified in clause f), except for commercial vegetable production in which case the Nitrogen Reference Point shall be the average annual nitrogen leaching loss during the reference period.~~
- c. ~~The Nitrogen Reference Point must be determined~~ calculated using the current most recent version of the ~~OVERSEER® Model-OverseerFM~~ as the default model. ~~(or any other models may be approved for use by the Chief Executive of the Waikato Regional Council, if the Chief Executive is satisfied that the other model provides an equivalent modelling output to that of OverseerFM, is adequately supported by experienced and qualified modellers, has been developed through a robust review and quality control process, and has supporting documentation, user guides and input standards).~~ The Nitrogen Reference Point shall be updated using the same reference data as initially used whenever a new version of OverseerFM, or any other approved model used to prepare the Nitrogen Reference Point, is released.
- d. ~~The Nitrogen Reference Point data shall comprise the data used in electronic output file from the OVERSEER® Model-OverseerFM or any other approved model to calculate the Nitrogen Reference Point.~~ Where the OVERSEER® Model-OverseerFM is used, it must be calculated using the OVERSEER® Best Practice Data Input Standards 2016 the Overseer User Guide (published by Overseer Ltd and available from within OverseerFM), with the exceptions and inclusions (including how missing data is managed) as set out in Schedule B Table 1 a the Waikato Regional Council Nitrogen Reference Point Development Guidelines. Where another approved model is used, it will conform to the data input standards as approved by the Chief Executive of the Waikato Regional Council.
- e. ~~The~~ Where OverseerFM is used to calculate the Nitrogen Reference Point the analysis (inputs and outputs) and the Nitrogen Reference Point data must be provided published to Waikato Regional Council:
 - i. For dairy farms, no later than six (6) months after this Chapter is made operative; or
 - ii. For non-dairy farms that require a resource consent under the rules of this Chapter, at the time a resource consent application is lodged; or
 - iii. Within 30 days of a written request made by the Waikato Regional Council, whichever is the earlier.within the period 1 September 2018 to 31 March 2019.
- f. ~~The Nitrogen Reference Period is the time period from 1 July 2014 to 30 June 2016, except for commercial vegetable production in which case the reference period is the time period from 1 July 2011 to 30 June 2016. The reference period is the two financial years covering 2014/2015 and 2015/2016, except for commercial vegetable production in which case the reference period is 1 July 2006 to 30 June 2016.~~
- g. ~~The following records (where relevant to the land use undertaken on the property or enterprise calculation and compliance auditing of the Nitrogen Reference Point) must be retained for the life of the Regional Plan and/or relevant consent, whichever is longer, and provided to Waikato Regional Council at its request:~~
 - i. ~~Stock numbers as recorded in annual accounts together with stock sale and purchase invoices~~ Records of stock numbers and stock classes, births and deaths, stock movements on and off the property, grazing records and transport records;
 - ii. ~~Dairy production data~~ Total annual milk solids as stated in the milk supply statement;
 - iii. ~~Invoices for fertiliser applied to the land~~ Records of fertiliser type and amount, including annual accounts, and any records of fertiliser application rates and placement;
 - iv. Quantity and type of invoices for feed supplements sold or purchased and used on the property;
 - v. Water use records for irrigation (to be averaged over 3 years or longer) in order to determine irrigation application rates (mm/ha/month per irrigated block) and areas irrigated;
 - vi. Crops grown on the land property (area and yield), quantities of each crop consumed on the property, and quantities sold off farm; and
 - vii. Horticulture crop diaries and New Zealand Good Agricultural Practice (NZGAP) records; and
 - viii. The Nitrogen Reference Point Data as defined in clause d; and
 - ix. Soil test data – including anion storage capacity; and
 - x. A map which shows property boundaries, block management areas, retired/non-productive areas and areas used for effluent irrigation.

Advice note: For the avoidance of doubt, financial information contained within the above records may be redacted (blacked out) prior to it being provided to Waikato Regional Council.¹⁵⁷

Table 1: Data input methodology for ensuring consistency of Nitrogen Reference Point data using the OVERSEER® Model¹⁵⁸

OVERSEER®Parameter	Setting that must be used	Explanatory note
Farm model Pastoral and horticulture	To cover the entire enterprise including riparian, retired, forestry, and yards and races. The model is to include non-contiguous properties that are part of the enterprise that are in the same sub-catchment. If the farm (for example where dairy animals are grazed or wintered) is part of another farming business such as a drystock farm, the losses from those animals will be represented in the drystock farm's Overseer model.	To capture the "whole farm" in one Overseer® file, where possible, to truly represent nitrogen losses from farm in the catchment area.
Location Pastoral and horticulture	Select Waikato Region	This setting has an effect on climate settings and some animal characteristics and is required to ensure consistency.
Animal distribution – relative productivity pastoral only	Use "no differences between blocks" with the following exceptions: <ul style="list-style-type: none"> ▪ Grazed pines or other woody vegetation. In this case use "Relative yield" and set the grazed pine blocks to 0.4 (40%). ▪ Where the farm has a mixture of irrigated and non-irrigated areas. In this case use "Relative yield" and set the irrigated area to 1 (100%), and the non irrigated areas to 0.75 (75%). 	
Wetlands	Entered as Riparian Blocks	As per the 2016 OVERSEER® Best Practice Data Input Standards.
Stock number entry	Based on specific stock numbers only	To ensure consistency and accuracy of stock number inputs.
Animal weights	Only use OVERSEER® defaults – do not enter in weights and use the age at start setting where available (national averages).	Accurate animal weights are difficult to obtain and prove.
Block climate data	Only use the Climate Station tool For contiguous blocks use the coordinates from the location of the dairy shed or the middle of the farm area (for non-dairy). For non contiguous blocks use individual blocks' climate station coordinates.	
Soil description	Use Soil Order – obtained from S-Map or where S-Map is unavailable from LRI 1:50,000 data or a soil map of the farm.	To ensure consistency between areas of the region that have S-Map data and those that don't.
Missing data	In the absence of Nitrogen Referencing information being provided the Waikato Regional Council will use appropriate default	Some farms will not be able to supply data, therefore a default must be established.

¹⁵⁷ Ballance PC1-6570, Beef and Lamb PC1-11506, FANZ PC1-10642, Fonterra PC1-10517, HortNZ PC1-10190, WRC PC1-3553

¹⁵⁸ Ballance PC1-6570, FANZ PC1-10642, Beef and Lamb PC1-11506, Fonterra PC1-10517

	numbers for any necessary inputs to the OVERSEER® model (such default numbers will generally be around 75% of normal Freshwater Management Unit average values for those inputs).	
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Schedule C – Minimum Farming Standards

Stock exclusion/Te Āpitianga C – Te aukatinga o ngā kararehe

Notwithstanding any other requirements of this Plan, and ~~except as provided by Exclusions I. and II. and III,~~ cattle, horses, deer and pigs ¹⁵⁹ must be excluded from the water bodies listed in ~~6. i. to iv.~~ below as follows:

1. The water bodies on land:
 - a. with a slope of up to 15 degrees; or
 - b. with a slope over 15 degrees where the stocking rate in any paddock adjoining a water body exceeds 18 stock units¹⁶⁰must be fenced to exclude cattle, horses, deer and pigs, unless those animals are prevented from entering the bed of the water body by a stock proof natural or constructed¹⁶¹ barrier formed by topography or vegetation.

Advice note: Clause 1 does not authorise the construction of fences or other barriers in the bed of a river or lake, or in a wetland.

2. New temporary, permanent or virtual¹⁶² fences installed after ~~this chapter becomes operative 22 October 2016~~ must be located to ensure cattle, horses, deer and pigs will be excluded from the bed of the water body. The fences must be located at a distance of not less than: ~~cannot be within one metre of the water body (excluding constructed wetlands).~~
 - a. 10 metres from the outer edge of the bed for waterbodies in an inanga spawning area;
 - b. 10 metres from the edge of any significant wetland; and
 - c. 5 metres from the outer edge of the bed for any other waterbodies.¹⁶³
3. Livestock Cattle, horses, deer and pigs¹⁶⁴ must not ~~be permitted to~~¹⁶⁵ enter onto or pass across the bed of the water body, except when using a livestock crossing structure or when they are being supervised and actively driven across a water body, at a location identified for this purpose in a Farm Environment Plan, in one continuous movement provided no more than one crossing per week occurs¹⁶⁶.

Advice note: Clause 3 does not authorise the construction of stock crossing structures in the bed of a river or lake, or in a wetland.¹⁶⁷

4. ~~For land use authorised under Rules 3.11.5.1 or 3.11.5.2, c~~ Clauses 1 and 2 must be complied with before the "Application Date" in Table 3.11-2. :
 - a. ~~By 1 July 2023 for properties and enterprises within Priority 1 sub-catchments listed in Table 3.11-2.~~
 - b. ~~By 1 July 2026 for properties and enterprises within Priority 2 and Priority 3 sub-catchments listed in Table 3.11-2.~~
5. ~~For land use authorised under Rules [3.11.5.3,] 3.11.5.4 or 3.11.5.5, clauses 1 and 2 must be complied with by the date and in the manner specified in the property's or enterprise's Farm Environment Plan, which shall be within 3 years following the dates by which a Farm Environment Plan must be provided to the Council, or in any case no later than 1 July 2026.~~
6. Water bodies from which cattle, horses, deer and pigs must be excluded:
 - a. The bed of a river (including any stream and modified river or stream) or artificial watercourse that is permanently or intermittently flowing; and
 - b. The bed of any lake; and
 - c. Any wetland, including a constructed wetland.
 - i. ~~Any river that continually contains surface water.~~
 - ii. ~~Any drain that continually contains surface water.~~
 - iii. ~~Any wetland, including a constructed wetland.~~
 - iv. ~~Any lake.~~¹⁶⁸

¹⁵⁹ Dairy Goat Co-Operative (N.Z) Ltd PC1-4135

¹⁶⁰ Beef and Lamb PC1-11507

¹⁶¹ Fish and Game PC1-11022

¹⁶² Ashby, J L and R J V1PC1-879, Beef and Lamb V1PC1-1724

¹⁶³ DoC PC1-11055

¹⁶⁴ Dairy Goat Co-Operative (N.Z) Ltd PC1-4135, A and S Dudin PC1-4910, A and M Goddard PC1-2341

¹⁶⁵ Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

¹⁶⁶ Alcock, C and C, Dunlop, T, Murphy WS, Beef and Lamb

¹⁶⁷ Beef and Lamb PC1-11507

¹⁶⁸ DoC PC1-11055

Exclusions:

The following situations are excluded from clauses 1, 2 and 3:

- I. Where the entry onto or passing across the bed of the water body is by horses that are being ridden or led.
- ~~II. Where the entry onto or passing across the bed of the water body is by a feral animal.¹⁶⁹~~
- III. Constructed ponds or constructed wetlands in which deer or pigs wallow that are located at least 10 metres away from the bed of a water body and which are not connected by an overland flow path to a water body.¹⁷⁰

For the purposes of Clause 6, an intermittently flowing river or intermittently flowing artificial watercourse is one which is not permanently flowing and meets at least three of the following criteria:

- (a) it has natural pools;
- (b) it has a well-defined channel, such that the bed and banks can be distinguished;
- (c) it contains surface water more than 48 hours after a rain event which results in stream flow;
- (d) rooted terrestrial vegetation is not established across the entire cross-sectional width of the channel;
- (e) organic debris resulting from flood can be seen on the floodplain; or
- (f) there is evidence of substrate sorting process, including scour and deposition.¹⁷¹

Fertiliser Application¹⁷²

7. Nitrogenous fertiliser is not applied at rates greater than 30kg/N/ha per dressing.
8. No nitrogenous fertiliser is applied during the months of June and July in any year.

Exclusions:

Clauses 7 and 8 do not apply to commercial vegetable production

Sacrifice paddocks and winter forage crop grazing

9. An un-grazed vegetated buffer with a width of at least 10 metres shall be maintained adjacent to any waterbody described in Clause 6, when adjacent to any area utilised for the grazing of a winter forage crop or the use of a sacrifice paddock.
10. The grazing of any winter forage crop shall not occur on land with a slope greater than 15 degrees.¹⁷³

Cultivation

11. No cultivation shall occur within 5 metres of any waterbody described in Clause 6.¹⁷⁴

¹⁶⁹ G Kilgour PC1-1923, A McGovern PC1-8327, Waipapa Farms Ltd and Carlyle Holdings Ltd PC1-4716

¹⁷⁰ Waikato and Waipa Branches of the New Zealand Deer Association PC1-9582

¹⁷¹ Tangata Whenua – Waikato and Waipa River Iwi PC1-9365, Rollett Farms PC1-5640

¹⁷² Federated Farmers V1PC1-758, Miraka Limited PC1-12465

¹⁷³ M B Harris PC1-6363, M Hansen PC1-10342, Ata Rangī PC1-6192, Southern Pastures PC1-11188

¹⁷⁴ From original Schedule 1

Schedule 1D - Requirements for Farm Environment Plans/Te Āpitiwhanga 1: Ngā Herenga i ngā Mahere Taiao ā-Pāmu

The Farm Environment Plan (FEP) will be prepared in accordance with Parts A, B and C below, reviewed in accordance with Part D, and changed in accordance with Part E.

PART A – PROVISION OF FEP

An FEP must be submitted to Waikato Regional Council (the council) using either:

1. A council digital FEP tool including the matters set out in Part B below to the extent relevant, with maps and data provided as spatial GIS layers¹⁷⁵; OR
2. An industry digital FEP tool that:
 - a) complies with the council's data exchange specifications; and
 - b) includes all of the matters set out in part C - E below to the extent relevant; and
 - c) includes maps and data provided as spatial GIS layers; and
 - d) has been approved by the Chief Executive of Waikato Regional Council as meeting the criteria in (a) – (c) above.

The Waikato Regional Council data exchange specifications will set out the standards and detail of the data exchange process to be used by external industry parties in the provision of FEPs.

PART B – FEP PURPOSE¹⁷⁶

The purpose of a Farm Environment Plan is:

1. To assess whether current farming activities are consistent with the goals and principles set out in part C of this schedule; and
2. Where current farming activities are not consistent with the goals and principles set out in part C of this schedule, to identify and record the specific, time bound actions and mitigations that will be adopted to ensure the farming activities are consistent with the goals and principles set out in part C of this schedule.

PART C – FEP CONTENT

The FEP shall contain as a minimum:

1. The following details that describe the land being farmed:
 - a) Full name, address and contact details (including email addresses and telephone numbers) of the person responsible for farming on the land;
 - b) Legal description of the land being farmed which is the subject of the FEP
 - a. The physical address and ownership of each parcel of land (if different from the person responsible the the farming on the land)
 - b. The legal description of each parcel of land
 - c. Any relevant farm identifiers such as dairy supply number, agribase identification number, and valuation reference.
 - c) Identification of the sub-catchment the land being farmed is within¹⁷⁷
2. A map(s) at a scale that clearly shows:
 - a) The property¹⁷⁸ boundaries of the land being farmed;
 - b) The sub-catchment(s) that the property or land being farmed is/are within, and their location in the sub-catchment
 - c) The boundaries of the main land management units or land uses on the land being farmed;
 - d) The location (and for named waterbodies, the names) of any permanently or intermittently flowing waterbodies on the property including wetlands, lakes, streams and rivers, and identify specifically any waterbodies that meet the criteria for stock exclusion in Schedule C;
 - e) The location of riparian vegetation and fences (or other stock proof barriers)⁴ adjacent to Schedule C water bodies;
 - f) The location on any Schedule C water bodies where stock have access, or there are stock crossings points, or there are stock crossing structures;
 - g) The location of any critical source areas and hotspots for contaminant loss to groundwater or surface water; and
 - h) The location(s) of any required the actions and practices that will be adopted to ensure farming activities are consistent with¹ the goals and principles listed in section 3.

¹⁷⁵ Miraka closing statement

¹⁷⁶ Federated Farmers Evidence of Grant Eccles

¹⁷⁷ Evidence of Helen Marr, for Fish and Game

¹⁷⁸ Evidence of Dr Debbie Care, representing Theland Group, Southern Pastures and AtaRangi

3. An assessment of whether farming practices are consistent with each of the following goals and principles; and
- a description of those farming practices that will continue to be undertaken in a manner consistent with the goals and principles;
 - A description of those farming practices that are not consistent with the goals or principles, and a description of the specific, time-bound actions and practices that will be adopted to ensure the farming activities are consistent with the goals and principles.

3a – Management area: Whole farm

Goal 1

To manage farming activities according to good farming practice, and in a way that minimises the loss of contaminants from the farm.

Principles

- Identify the characteristics of the farm system, the risks that the farm system poses to water quality, and the good farming practices that minimise the losses of sediment, microbial pathogens, phosphorus and nitrogen.
- Maintain accurate and auditable records of annual farm inputs, outputs and management practices.
- Manage farming operations to minimise losses of sediment, microbial pathogens, phosphorus and nitrogen to water, and maintain or enhance soil structure.

3b – Management Area: Nutrient management

Goal 2

To minimise nutrient losses to water and avoid inefficient nutrient use¹⁷⁹.

Principles

- Monitor soil phosphorus levels and maintain them at or below the agronomic optimum for the farm system.
- Manage the amount and timing of nutrient inputs, taking account of all sources of nitrogen and phosphorus, to match plant requirements and minimise risk of losses.
- Store and load nutrients to minimise risk of spillage, leaching and loss into waterbodies.
- Ensure equipment for spreading nutrients is well maintained and calibrated.
- Store, transport and distribute feed to minimise wastage, leachate and soil damage.

Goal 3

To farm in accordance with the nitrogen management requirements of Chapter 3.11 or any requirement specified in a resource consent

Principle

Either, where the property's NRP is ≤75th percentile:

9a. Farm in a manner that does not result in farm nitrogen losses exceeding the farm's NRP;

Or, where the property's NRP is > than the 75th percentile

9b. Farm in a manner that reduces farm nitrogen losses below the 75th percentile for the FMU.

3c – Management Area: Waterways

Goal 4

To minimise losses of sediment, microbial pathogens, phosphorus and nitrogen to waterways.

Principles

- Identify risk of overland flow of phosphorus, nitrogen, sediment and microbial pathogens on the property and implement measures to minimise losses of these to waterbodies.
- Locate and manage farm tracks, gateways, water troughs, self-feeding areas, stock camps, wallows and other sources of run-off to minimise effects on water quality.

Goal 5

To exclude stock from waterbodies and minimise stock damage to the beds and margins of wetlands and riparian areas.

Principle

¹⁷⁹ In response to Evidence of Corina Jordan, BLNZ

12. In addition to principle 13¹⁸⁰, Exclude stock from waterbodies to the extent that it is compatible with land-form, stock class and stock intensity. Where exclusion is not practicable, mitigate impacts on waterways.
13. As a minimum, exclude stock in a manner consistent with the requirements of schedule C.

3d – Management Area: Land and soil

Goal 6

To minimise contaminant losses to waterways from soil disturbance and erosion.

Principles

14. periods of exposed soil between crops/pasture and adopt measures to minimise erosion, overland flow and leaching.
15. Minimise soil losses by retiring erosion prone land or by adopting appropriate soil conservation measures and practices.
16. Select appropriate paddocks for growing crops and intensive grazing, minimising possible nitrogen and phosphorus, faecal, and sediment loss from critical source areas.
17. Manage grazing and crops to minimise losses from critical source areas.

3e – Management Area: Effluent

Goal 7

To minimise contaminant losses to waterways from farm animal effluent.

Principles

18. Ensure the effluent system meets industry-specific Code of Practice.
19. Have sufficient storage available for farm animal effluent and wastewater and actively manage effluent storage levels as low as practicable.
20. Ensure equipment for spreading effluent and other organic manures is well maintained and calibrated.
21. Apply effluent to pasture and crops at depths, rates and times to match plant requirements and soil water holding capacity.

3f – Management Area: Water and irrigation

Goal 8

To operate irrigation systems efficiently and ensuring that the actual use of water is monitored and is efficient.

Principles

22. Manage the amount and timing of irrigation inputs to meet plant demands and minimise risk of leaching and run off.
 23. Design, check and operate irrigation systems to minimise the amount of water needed to meet production objectives.
4. The FEP shall include for each objective and principle in section C3 above:
- a) Detail and content that reflects the scale of environmental risk posed by the activity;
 - b) A defined and auditable description of the actions and practices to be undertaken to farm in accordance with the goals and principles in Part C;
 - c) The records and evidence that must be kept that demonstrate performance and the achievement of an objective or principle listed in Part C.

PART D – FEP REVIEW REQUIREMENTS

The FEP shall be reviewed by a Certified Farm Environment Planner for consistency with this schedule:

1. Prior to lodging a landuse consent application with the Council under rule 3.11.5.3 – 3.11.5.5 of Chapter 3.11; and
2. Within 12 months of the granting of that consent application; and
3. In accordance with the review intervals set out in the conditions of that resource consent.

The purpose of the review is to provide an expert opinion whether the farming activities on the property are being undertaken in a manner consistent with the goals and principles set out in Part B of this schedule.

The review shall be undertaken by a Certified Farm Environment Planner who holds a reviewing endorsement (issued by WRC), and must be undertaken in accordance with the review process set out the Waikato Regional Councils FEP Independent Review manual.

¹⁸⁰ Changes recommended by WRC to improve clarity and understanding

The review shall be undertaken by re-assessing the FEP in accordance with the requirements set out in this schedule.

The results of the review shall be provided to the Waikato Regional Council, within 20 working days of the review due date.

PART E – FEP CHANGES

Unless otherwise required by the Waikato Regional Council in accordance with any conditions of the resource consent, changes can be made to the FEP without triggering the need for review by a CFEP, provided:

1. The farming activity and FEP remain consistent with Parts B and C of this schedule
2. The change to the FEP does not contravene any mandatory requirement of the resource consent, or any requirement of the Regional Plan that is not already authorised.
3. The nature of the change is documented in writing and made available to any CFEP undertaking a review, or to the Waikato Regional Council, on request.

~~A Farm Environment Plan shall be prepared in accordance with the requirements of A below. The Farm Environment Plan shall be certified as meeting the requirements of A by a Certified Farm Environment Planner.~~

~~The Farm Environment Plan shall identify all sources of sediment, nitrogen, phosphorus and microbial pathogens, and identify actions, and timeframes for those actions to be completed, in order to reduce the diffuse discharges of these contaminants.~~

~~The Farm Environment Plan must clearly identify how specified minimum standards will be complied with.~~

~~The requirements set out in A apply to all Farm Environment Plans, including those prepared within a Certified Industry Scheme.~~

~~This schedule applies to all farming activities, but it is acknowledged that some provisions will not be relevant to every farming activity.~~

~~A. Farm Environment Plans shall contain as a minimum:~~

~~1. The property or enterprise details:~~

- ~~(a) Full name, address and contact details (including email addresses and telephone numbers) of the person responsible for the property or enterprise.~~
- ~~(b) Trading name (if applicable, where the owner is a company or other entity).~~
- ~~(c) A list of land parcels which constitute the property or enterprise:
 - ~~(i) the physical address and ownership of each parcel of land (if different from the person responsible for the property or enterprise) and any relevant farm identifiers such as the dairy supply number, Agribase identification number, valuation reference; and~~
 - ~~(ii) The legal description of each parcel of land.~~~~

~~2. An assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens associated with the farming activities on the property, and the priority of those identified risks, having regard to sub-catchment targets in Table 3.11.1 and the priority of lakes within the sub-catchment. As a minimum, the risk assessment shall include (where relevant to the particular land use):~~

- ~~(a) A description of where and how stock shall be excluded from water bodies for stock exclusion including:
 - ~~(i) the provision of fencing and livestock crossing structures to achieve compliance with Schedule C; and~~
 - ~~(ii) for areas with a slope exceeding 25o and where stream fencing is impracticable, the provision of alternative mitigation measures.~~~~
- ~~(b) A description of setbacks and riparian management, including:
 - ~~(i) The management of water body margins including how damage to the bed and margins of water bodies, and the direct input of contaminants will be avoided, and how riparian margin settling and filtering will be provided for; and~~~~

- (ii) ~~Where practicable the provision of minimum grazing setbacks from water bodies for stock exclusion of 1 metre for land with a slope of less than 15° and 3 metres for land with a slope between 15° and 25°; and~~
 - (iii) ~~The provision of minimum cultivation setbacks of 5 metres.~~
- (c) ~~A description of the critical source areas from which sediment, nitrogen, phosphorus and microbial pathogens are lost, including:~~
- (i) ~~the identification of intermittent waterways, overland flow paths and areas prone to flooding and ponding, and an assessment of opportunities to minimise losses from these areas through appropriate stocking policy, stock exclusion and/or measures to detain floodwaters and settle out or otherwise remove sediment, nitrogen, phosphorus and microbial pathogens (e.g. detention bunds, sediment traps, natural and constructed wetlands); and~~
 - (ii) ~~the identification of actively eroding areas, erosion prone areas, and areas of bare soil and appropriate measures for erosion and sediment control and re-vegetation; and~~
 - (iii) ~~an assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens from tracks and races and livestock crossing structures to waterways, and the identification of appropriate measures to minimise these discharges (e.g. cut off drains, and shaping); and~~
 - (iv) ~~the identification of areas where effluent accumulates including yards, races, livestock crossing structures, underpasses, stock camps, and feed-out areas, and appropriate measures to minimise the risk of diffuse discharges of contaminants from these areas to groundwater or surface water; and~~
 - (v) ~~the identification of other 'hotspots' such as fertiliser, silage, compost, or effluent storage facilities, wash-water facilities, offal or refuse disposal pits, and feeding or stock holding areas, and the appropriate measures to minimise the risk of diffuse discharges of contaminants from these areas to groundwater or surface water.~~
- (d) ~~An assessment of appropriate land use and grazing management for specific areas on the farm in order to maintain and improve the physical and biological condition of soils and minimise the diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens to water bodies, including:~~
- (i) ~~matching land use to land capability; and~~
 - (ii) ~~identifying areas not suitable for grazing; and~~
 - (iii) ~~stocking policy to maintain soil condition and pasture cover; and~~
 - (iv) ~~the appropriate location and management of winter forage crops; and~~
 - (v) ~~suitable management practices for strip grazing.~~
- (e) ~~A description of nutrient management practices including a nutrient budget for the farm enterprise calculated using the model OVERSEER® in accordance with the OVERSEER® use protocols, or using any other model or method approved by the Chief Executive Officer of Waikato Regional Council.~~
- (f) ~~A description of cultivation management, including:~~
- (i) ~~The identification of slopes over 15° and how cultivation on them will be avoided; unless contaminant discharges to water bodies from that cultivation can be avoided; and~~
 - (ii) ~~How the adverse effects of cultivation on slopes of less than 15° will be mitigated through appropriate erosion and sediment controls for each paddock that will be cultivated including by:~~
 - (a) ~~assessing where overland flows enters and exits the paddock in rainfall events; and~~
 - (b) ~~identifying appropriate measures to divert overland flows from entering the cultivated paddock; and~~
 - (c) ~~identifying measures to trap sediment leaving the cultivated paddock in overland flows; and~~
 - (d) ~~maintaining appropriate buffers between cultivated areas and water bodies (minimum 5m setback).~~
 - (e) ~~A description of collected animal effluent management including how the risks associated with the operation of effluent systems will be managed to minimise contaminant discharges to groundwater or surface water.~~
 - (f) ~~A description of freshwater irrigation management including how contaminant loss arising from the irrigation system to groundwater or surface water will be minimised.~~

3. A spatial risk map(s) at a scale that clearly shows:
- (a) The boundaries of the property; and
 - (b) The locations of the main land uses¹⁸¹ that occur on the property; and
 - (c) The locations of existing and future mitigation actions to manage contaminant diffuse discharges; and
 - (d) Any relevant internal property boundaries that relate to risks and mitigation actions described in this plan; and
 - (e) The location of continually flowing rivers, streams, and drains and permanent lakes, ponds and wetlands; and
 - (f) The location of riparian vegetation and fences adjacent to water bodies; and
 - (g) The location of critical source areas for contaminants, as identified in 2 (c) above.
4. A description of the actions that will be undertaken in response to the risks identified in the risk assessment in 2 above (having regard to their relative priority) as well as where the mandatory time bound actions will be undertaken, and when and to what standard they will be completed.
5. A description of the following:
- (a) Actions, timeframes and other measures to ensure that the diffuse discharge of nitrogen from the property or enterprise, as measured by the five-year rolling average annual nitrogen loss as determined by the use of the current version of OVERSEER®, does not increase beyond the property or enterprise's Nitrogen Reference Point, unless other suitable mitigations are specified; or
 - (b) Where the Nitrogen Reference Point exceeds the 75th percentile nitrogen leaching value, actions, timeframes and other measures to ensure the diffuse discharge of nitrogen is reduced so that it does not exceed the 75th percentile nitrogen leaching value by 1 July 2026, except in the case of Rule 3.11.5.5.

Vegetable growing minimum standards

Farm environment plans required under Rule 3.11.5.5 shall, in addition to the matters set out above, ensure the following matters are addressed:

1	Nitrogen, Phosphorus	Annual soil testing regime, fertiliser recommendations by block and by crop
2	Nitrogen, Phosphorus	Tailored fertiliser plans by block and by crop
3	Nitrogen, Phosphorus	Both (1) and (2) prepared by an appropriately qualified person
4	Nitrogen, Phosphorus	Annual calibration of fertiliser delivering systems through an approved programme such as Spreadmark/Fertspread
5	Soil/Phosphorus	As a minimum by block: an approved erosion and sediment control plan constructed in accordance with the Erosion and Sediment Control Guidelines for Vegetable Production June 2014
6	Nitrogen, Phosphorus	Documentation available for proof of fertiliser placement according to recommended instruction
7	Nitrogen, Phosphorus	Adoption and use of improved fertiliser products proved effective and available such as formulated prills, coatings and slow release mechanisms
8	Nitrogen, Phosphorus	Evidence available to demonstrate split applications by block/crop following expert approved practice relating to: <ul style="list-style-type: none"> ○ form of fertiliser applied ○ rate of application

¹⁸¹ For dairy farms this might be the OVERSEER® blocks, for drystock farms this might be Land Use Capability blocks.

		<ul style="list-style-type: none">○ placement of fertiliser○ timing of application¹⁸²
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¹⁸² J and A Anderson PC1-4261, Beef and Lamb PC1-11508, Federated Farmers V1PC1-766, Horticulture NZ PC1-12435, S and A Kelton PC1-7855, Maniapoto Maori Trust Board PC1-9366

Schedule 2 – Certification of Industry Schemes/Te Āpiti hanga 2 – Te whakamana i ngā tohu o ngā Kaupapa Ahumahi¹⁸³

The purpose of this schedule is to set out the criteria against which applications to approve an industry scheme will be assessed.

The application shall be lodged with the Waikato Regional Council, and shall include information that demonstrates how the following requirements are met. The Waikato Regional Council may request further information or clarification on the application as it sees fit.

Approval will be at the discretion of the Chief Executive Officer of the Waikato Regional Council subject to the Chief Executive Officer being satisfied that the scheme will effectively deliver on the assessment criteria.

Assessment Criteria

A. Certified Industry Scheme System

The application must demonstrate that the Certified Industry Scheme:

1. Is consistent with:
 - (a) the achievement of the water quality targets referred to in Objective 3; and
 - (b) the purposes of Policy 2 or 3; and
 - (c) the requirements of Rules 3.11.5.3 and 3.11.5.5.
2. Has an appropriate ownership structure, governance arrangements and management.
3. Has documented systems, processes, and procedures to ensure:
 - (a) Competent and consistent performance in Farm Environment Plan preparation and audit.
 - (b) Effective internal monitoring of performance.
 - (c) Robust data management.
 - (d) Timely provision of suitable quality data to Waikato Regional Council.
 - (e) Timely and appropriate reporting.
 - (f) Corrective actions will be implemented and escalated where required, including escalation to Waikato Regional Council if internal escalation is not successful.
 - (g) Internal quality control.
 - (h) The responsibilities of all parties to the Certified Industry Scheme are clearly stated.
 - (i) An accurate and up to date register of scheme membership is maintained.
 - (j) Transparency and public accountability of Certified Industry Schemes
 - (k) The articles of the scheme are available for public viewing.

B. People

The application must demonstrate that:

1. Those generating and auditing Farm Environment Plans are suitably qualified and experienced.
2. Auditing of Farm Environment plan requirements is independent of the Farm Environment Plan preparation and approval.

C. Farm Environment Plans

The application must demonstrate that Farm Environment Plans are prepared in conformance with Schedule 1.

¹⁸³ Fish & Game PC1-10911, DoC PC1-10648, Forest & Bird PC1-8205

3.11.67 List of Tables and Maps/Te Rārangi o ngā Ripanga me ngā Mahere

Table 3.11-1: Short term attribute states and ~~long term numerical water quality~~ 80-year attribute states¹⁸⁴ ~~targets~~ for the Waikato and Waipā River catchments/Ngā whāinga ā-tau taupoto, tauroa hoki mō te kounga wai i te riu o ngā awa o Waikato me Waipā

Table 3.11-2 List of sub-catchments showing “Application Date” ~~Priority 1, Priority 2, and Priority 3 sub-catchments/Te rārangi o ngā riu kōawaawa e whakaatu ana i te riu kōawaawa i te Taumata 1, i te Taumata 2, me te Taumata 3~~

Map 3.11-1: Map of the Waikato and Waipā River catchments, showing Freshwater Management Units

Map 3.11-2: Map of the Waikato and Waipā River catchments, showing sub-catchments

Table 3.11-1: Short term water quality attribute states and ~~long term numerical water quality~~ 80-year attribute states ~~targets~~ for the Waikato and Waipā River catchments/Ngā whāinga ā-tau taupoto, tauroa hoki mō te kounga wai i te riu o ngā awa o Waikato me Waipā

Within the Waikato and Waipā River catchments, these ~~targets~~ desired water quality states are used in decision-making processes guided by the objectives in Chapter 3.11 and for future monitoring of changes in the state of water quality within the catchments. With regard to consent applications for diffuse discharges or point source discharges of nitrogen, phosphorus, sediment and microbial pathogens, it is not intended, nor is it in the nature of attribute states ~~water quality targets~~¹⁸⁵, that they be used directly as receiving water compliance limits/standards. Reference should also be made to Method 3.2.4.1.

Explanatory note to Table 3.11-1

The tables set out the concentrations (all attributes except clarity) or visibility distance (clarity attribute) to be maintained or achieved by actions taken in the short term and ~~at over~~ 80-years for rivers and tributaries, and at 80-years for lakes FMUs. Where water quality is currently high (based on 2010-2014 monitoring data), the short term attribute states and 80-year attribute states ~~targets~~ will be the same as the current state and there is to be no decline in quality (that is, no increase in attribute concentration or decrease in clarity). Where water quality needs to improve, the attribute states ~~values~~ to be achieved at a site indicate a short term and long term reduction in concentration or increase in clarity compared to the current state.

For example, at Otamakokore Stream, Upper Waikato River FMU:

- the current state value for median nitrate is 0.740 mgNO₃-N/L. The short term attribute state and 80-year attribute state ~~targets~~ are set at 0.740 mgNO₃-N/L to reflect that there is to be no decline in water quality
- the current state value for one of the four measures of E.coli, namely the 95th percentile, is 696 E.coli/100ml. The 80-year attribute state ~~target~~ is set at 540 E.coli/100ml and the short term attribute state is set at 10% of the difference between the current state value and the 80 year attribute state ~~target~~¹⁸⁶.

The achievement of the attribute states ~~targets~~ in Table 3.11-1 will be determined through analysis of 5-yearly monitoring data. The variability in water quality (such as due to seasonal and climatic events) and the variable response times of the system to implementation of mitigations may mean that the states ~~targets~~ are not observed for every attribute at all sites in the short term.

The effect of some contaminants (particularly nitrogen) discharged from land has not yet been seen in the water. This means that in addition to reducing discharges from current use and activities, further reductions will be required to address the load to come that will contribute to nitrogen loads in the water. There are time lags between contaminants discharged from land uses and the effect in the water. For nitrogen in the Upper Waikato River particularly, this is because of the time taken for nitrogen to travel through the soil profile into groundwater and then eventually into the rivers. This means that there is some nitrogen leached from land use change that occurred decades ago that has entered groundwater, but has not yet entered the Waikato River. In some places, water quality (in terms of nitrogen) will deteriorate before it gets better. Phosphorus, sediment and microbial pathogens and diffuse discharges from land have shorter lag times, as they reach water from overland flow. However, there will be some time lags for actions taken to address these contaminants to be effective (for example tree planting for erosion control).

¹⁸⁴ GBC Winstone PC1-3627

¹⁸⁵ GBC Winstone PC1-3627

¹⁸⁶ All recommended amendments to the Explanatory Note: GBC Winstone PC1-3627

“Current” in the tables below refers to the water quality statistics for the 2010-2014 period.

Table 3.11-1(a) – E.coli and Clarity Attribute States

	Median E. coli (cfu/100 mL)			95%ile E. coli (cfu/100 mL)			E. coli >540 cfu/100 mL (%)			E. coli >260 cfu/100 mL (%)			Median clarity (m)		
	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year
Upper Waikato FMU															
Waikato River Ohaaki Br	<u>14</u>	<u>14</u>	<u>14</u>	<u>80</u>	<u>70 80</u>	<u>70 80</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3.8</u>	<u>3.8</u>	<u>3.8</u>
Waikato River Ohakuri Tailrace Br	<u>2</u>	<u>2</u>	<u>2</u>	<u>16</u>	<u>15 16</u>	<u>15 16</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2.25</u>	<u>3.4 2.3</u>	<u>3.4 3</u>
Waikato River Whakamaru Tailrace	<u>8</u>	<u>8</u>	<u>8</u>	<u>60</u>	<u>60</u>	<u>60</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1.87</u>	<u>2</u>	<u>3</u>
Waikato River Waipāpa Tailrace	<u>8</u>	<u>8</u>	<u>8</u>	<u>140</u>	<u>162-140</u>	<u>162 140</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1.86</u>	<u>2</u>	<u>3</u>
Pueto Stm Broadlands Rd Br	<u>21</u>	<u>21</u>	<u>21</u>	<u>92</u>	<u>92</u>	<u>92</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1.64</u>	<u>1.8</u>	<u>3</u>
Torepatutahi Stm Vaile Rd Br	<u>54</u>	<u>54</u>	<u>54</u>	<u>215</u>	<u>216-215</u>	<u>216-215</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	<u>4</u>			
Waiotapu Stm Homestead Rd Br	<u>110</u>	<u>110</u>	<u>110</u>	<u>280</u>	<u>281-280</u>	<u>281 280</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>9</u>	<u>9</u>	<u>9</u>			
Mangakara Stm (Reporoa) SH5	<u>140</u>	<u>139</u>	<u>130</u>	<u>1700</u>	<u>1584</u>	<u>540</u>	<u>13</u>	<u>12</u>	<u>5</u>	<u>26</u>	<u>25</u>	<u>20</u>	<u>0.86</u>	<u>0.9</u>	<u>1</u>
Kawaunui Stm SH5 Br	<u>200</u>	<u>193</u>	<u>130</u>	<u>2535</u>	<u>2335</u>	<u>540</u>	<u>18</u>	<u>17</u>	<u>5</u>	<u>33</u>	<u>32</u>	<u>20</u>	<u>1.33</u>	<u>1.4</u>	<u>1.6</u>
Waiotapu Stm Campbell Rd Br	<u>2</u>	<u>2</u>	<u>2</u>	<u>18</u>	<u>18</u>	<u>18</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1.17</u>	<u>1.2</u>	<u>1.6</u>
Otamakokore Stm Hossack Rd	<u>220</u>	<u>211</u>	<u>130</u>	<u>696</u>	<u>680</u>	<u>540</u>	<u>8</u>	<u>8</u>	<u>5</u>	<u>31</u>	<u>30</u>	<u>20</u>	<u>1.10</u>	<u>1.2</u>	<u>1.6</u>
Whirinaki Stm Corbett Rd	<u>16</u>	<u>16</u>	<u>16</u>	<u>98</u>	<u>98</u>	<u>98</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>		<u>2.7</u>	<u>3</u>
Tahunaatara Stm Ohakuri Rd	<u>110</u>	<u>110</u>	<u>110</u>	<u>810</u>	<u>783</u>	<u>540</u>	<u>10</u>	<u>10</u>	<u>5</u>	<u>13</u>	<u>13</u>	<u>13</u>	<u>1.25</u>	<u>1.3</u>	<u>1.6</u>
Mangaharakeke Stm SH30	<u>170</u>	<u>166</u>	<u>130</u>	<u>700</u>	<u>684</u>	<u>540</u>	<u>10</u>	<u>10</u>	<u>5</u>	<u>26</u>	<u>25</u>	<u>20</u>	<u>1.02</u>	<u>1.1</u>	<u>1.6</u>
Waipāpa Stm (Mokai) Tirohanga Rd	<u>100</u>	<u>100</u>	<u>100</u>	<u>1215</u>	<u>1147</u>	<u>540</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>1.11</u>	<u>1.2</u>	<u>1.6</u>
Mangakino Stm Sandel Rd	<u>40</u>	<u>40</u>	<u>40</u>	<u>250</u>	<u>250-251</u>	<u>250-251</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>1.63</u>	<u>1.8</u>	<u>3</u>
Whakauru Stm SH1 Br	<u>480</u>	<u>445</u>	<u>130</u>	<u>2280</u>	<u>2106</u>	<u>540</u>	<u>42</u>	<u>38</u>	<u>5</u>	<u>87</u>	<u>80</u>	<u>20</u>	<u>0.75</u>	<u>0.8</u>	<u>1</u>
Mangamingi Stm Paronui Rd	<u>580</u>	<u>535</u>	<u>130</u>	<u>2330</u>	<u>2151</u>	<u>540</u>	<u>51</u>	<u>46</u>	<u>5</u>	<u>79</u>	<u>73</u>	<u>20</u>	<u>0.82</u>	<u>0.8</u>	<u>1</u>
Pokaiwhenua Stm Arapuni - Putaruru	<u>150</u>	<u>148</u>	<u>130</u>	<u>1455</u>	<u>1363</u>	<u>540</u>	<u>13</u>	<u>12</u>	<u>5</u>	<u>23</u>	<u>23</u>	<u>20</u>	<u>1.26</u>	<u>1.3</u>	<u>1.6</u>
Little Waipā Stm Arapuni - Putaruru	<u>110</u>	<u>110</u>	<u>110</u>	<u>1470</u>	<u>1377</u>	<u>540</u>	<u>8</u>	<u>8</u>	<u>5</u>	<u>21</u>	<u>21</u>	<u>20</u>	<u>1.53</u>	<u>1.5</u>	<u>1.6</u>
Middle Waikato FMU															
Waikato River Narrows Boat Ramp	<u>39</u>	<u>39</u>	<u>39</u>	<u>265</u>	<u>340 265</u>	<u>260-265</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>1.60</u>	<u>1.7 1.6</u>	<u>1.7 1.6</u>
Waikato River Horotiu Br	<u>90</u>	<u>90</u>	<u>90</u>	<u>650</u>	<u>774 639</u>	<u>540</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>1.35</u>	<u>1.4</u>	<u>1.6</u>
Karapiro Stm Hickey Rd Bridge	<u>295</u>	<u>279</u>	<u>130</u>	<u>4960</u>	<u>4518</u>	<u>540</u>	<u>26</u>	<u>24</u>	<u>5</u>	<u>53</u>	<u>50</u>	<u>20</u>	<u>0.93</u>	<u>0.9</u>	<u>1</u>
Mangawhero Stm Cambridge-Ohaupo	<u>590</u>	<u>544</u>	<u>130</u>	<u>3185</u>	<u>2920</u>	<u>540</u>	<u>51</u>	<u>46</u>	<u>5</u>	<u>89</u>	<u>82</u>	<u>20</u>	<u>0.26</u>	<u>0.3</u>	<u>1</u>
Mangaonua Stm Hoeka Rd	<u>1500</u>	<u>1363</u>	<u>130</u>	<u>7020</u>	<u>6372</u>	<u>540</u>	<u>87</u>	<u>79</u>	<u>5</u>	<u>97</u>	<u>89</u>	<u>20</u>	<u>0.91</u>	<u>1 0.9</u>	<u>1</u>
Mangaone Stm Annebrooke Rd Br	<u>800</u>	<u>733</u>	<u>130</u>	<u>2220</u>	<u>2052</u>	<u>540</u>	<u>71</u>	<u>64</u>	<u>5</u>	<u>92</u>	<u>85</u>	<u>20</u>	<u>0.95</u>	<u>0.9 1</u>	<u>1</u>
Mangakotukutuku Stm Peacockes Rd	<u>500</u>	<u>463</u>	<u>130</u>	<u>13025</u>	<u>11394 11777</u>	<u>540</u>	<u>46</u>	<u>42</u>	<u>5</u>	<u>95</u>	<u>88</u>	<u>20</u>	<u>0.41</u>	<u>0.5</u>	<u>1</u>
Waitawhiriwhiri Stm Edgecumbe Street	<u>605</u>	<u>558</u>	<u>130</u>	<u>6520</u>	<u>5922</u>	<u>540</u>	<u>55</u>	<u>50</u>	<u>5</u>	<u>87</u>	<u>80</u>	<u>20</u>	<u>0.38</u>	<u>0.4</u>	<u>1</u>
Kirikirihoa Stm Tauhara Dr	<u>570</u>	<u>526</u>	<u>130</u>	<u>3620</u>	<u>2124 3312</u>	<u>540</u>	<u>53</u>	<u>48</u>	<u>5</u>	<u>87</u>	<u>80</u>	<u>20</u>	<u>0.40</u>	<u>0.5</u>	<u>1</u>
Lower Waikato FMU															
Waikato River Huntly-Tainui Br	<u>125</u>	<u>125</u>	<u>125</u>	<u>2000</u>	<u>1944-1854</u>	<u>540</u>	<u>13</u>	<u>12</u>	<u>5</u>	<u>27</u>	<u>26</u>	<u>20</u>	<u>0.87</u>	<u>0.9</u>	<u>1</u>
Waikato River Mercer Br	<u>80</u>	<u>80</u>	<u>80</u>	<u>1550</u>	<u>1494 1449</u>	<u>540</u>	<u>12</u>	<u>11</u>	<u>5</u>	<u>20</u>	<u>20</u>	<u>20</u>			
Waikato River Tuakau Br	<u>80</u>	<u>80</u>	<u>80</u>	<u>1600</u>	<u>1584-1494</u>	<u>540</u>	<u>12</u>	<u>11</u>	<u>5</u>	<u>18</u>	<u>18</u>	<u>18</u>	<u>0.61</u>	<u>0.7</u>	<u>1</u>
Komakorau Stm Henry Rd	<u>1100</u>	<u>1003</u>	<u>130</u>	<u>3800</u>	<u>3474</u>	<u>540</u>	<u>85</u>	<u>77</u>	<u>5</u>	<u>92</u>	<u>85</u>	<u>20</u>	<u>0.17</u>	<u>0.3</u>	<u>1</u>
Mangawara Stm Rutherford Rd Br	<u>1000</u>	<u>913</u>	<u>130</u>	<u>5445</u>	<u>4955</u>	<u>540</u>	<u>70</u>	<u>64</u>	<u>5</u>	<u>91</u>	<u>84</u>	<u>20</u>	<u>0.25</u>	<u>0.3</u>	<u>1</u>

	Median <i>E. coli</i> (cfu/100 mL)			95thile <i>E. coli</i> (cfu/100 mL)			<i>E. coli</i> >540 cfu/100 mL (%)			<i>E. coli</i> >260 cfu/100 mL (%)			Median clarity (m)				
	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year		
Awaroa Stm (Rotowaro) Sansons Br	<u>290</u>	<u>274</u>	<u>130</u>	<u>1940</u>	1800	540	<u>18</u>	<u>17</u>	<u>5</u>	<u>62</u>	<u>58</u>	<u>20</u>	<u>0.84</u>	<u>0.8</u>	<u>0.9</u>	1	
Matahuru Stm Waiterimu Road	<u>600</u>	<u>553</u>	<u>130</u>	<u>6770</u>	6147	540	<u>65</u>	<u>59</u>	<u>5</u>	<u>87</u>	<u>80</u>	<u>20</u>	<u>0.31</u>	0.4		1	
Whangape Stm Rangiriri-Glen Murray Rd	<u>220</u>	<u>211</u>	<u>130</u>	<u>588</u>	<u>584-583</u>	540	<u>9</u>	<u>9</u>	<u>5</u>	<u>43</u>	<u>41</u>	<u>20</u>	<u>0.17</u>	0.3		1	
Waerenga Stm SH2 Maramarua	<u>500</u>	<u>463</u>	<u>130</u>	<u>5605</u>	5098	540	<u>38</u>	<u>35</u>	<u>5</u>	<u>82</u>	<u>76</u>	<u>20</u>	<u>0.83</u>	0.9		1	
Whangamarino River Jefferies Rd Br	<u>600</u>	<u>553</u>	<u>130</u>	<u>5175</u>	4712	540	<u>57</u>	<u>52</u>	<u>5</u>	<u>87</u>	<u>80</u>	<u>20</u>	<u>0.49</u>	<u>0.6</u>	<u>0.5</u>	1	
Mangatangi River SH2 Maramarua	<u>380</u>	<u>355</u>	<u>130</u>	<u>6125</u>	5567	540	<u>30</u>	<u>28</u>	<u>5</u>	<u>83</u>	<u>77</u>	<u>20</u>	<u>0.54</u>	<u>0.5</u>	<u>0.6</u>	1	
Mangatawhiri River Lyons Rd Buckingham Br	<u>190</u>	<u>184</u>	<u>130</u>	<u>5615</u>	5108	540	<u>13</u>	<u>12</u>	<u>5</u>	<u>30</u>	<u>29</u>	<u>20</u>	<u>1.63</u>	1.6		1.6	
Whangamarino River Island Block Rd	<u>180</u>	<u>175</u>	<u>130</u>	<u>667</u>	<u>655 654</u>	540	<u>17</u>	<u>16</u>	<u>5</u>	<u>39</u>	<u>37</u>	<u>20</u>	<u>0.20</u>	0.3		1	
Whakapipi Stm SH22 Br	<u>320</u>	<u>301</u>	<u>130</u>	<u>1910</u>	1773	540	<u>35</u>	<u>32</u>	<u>5</u>	<u>74</u>	<u>69</u>	<u>20</u>	<u>1.10</u>	1.1		1.1	
Ohaeroa Stm SH22 Br	<u>300</u>	<u>283</u>	<u>130</u>	<u>5125</u>	4667	540	<u>30</u>	<u>28</u>	<u>5</u>	<u>52</u>	<u>49</u>	<u>20</u>	<u>0.81</u>	0.8		1	
Opuatia Stm Ponganui Rd	<u>390</u>	<u>364</u>	<u>130</u>	<u>3160</u>	2898	540	<u>34</u>	<u>31</u>	<u>5</u>	<u>68</u>	<u>63</u>	<u>20</u>	<u>0.53</u>	0.6		1	
Awaroa River (Waiuku) Otatau Rd Br Moseley	<u>240</u>	<u>229</u>	<u>130</u>	<u>1070</u>	1017	540	<u>17</u>	<u>16</u>	<u>5</u>	<u>43</u>	<u>41</u>	<u>20</u>	<u>0.37</u>	0.4		1	
Waipā River FMU																	
Waipā River Mangaokewa Rd	<u>210</u>	<u>202</u>	<u>130</u>	<u>2625</u>	2417	540	<u>22</u>	<u>20</u>	<u>5</u>	<u>35</u>	<u>34</u>	<u>20</u>	<u>1.51</u>	1.5		1.6	
Waipā River at Otewa	<u>236</u>	<u>225</u>	<u>130</u>	<u>2203</u>	<u>2036-2037</u>	540	<u>22</u>	<u>20</u>	<u>5</u>	<u>43</u>	<u>41</u>	<u>20</u>	<u>2.13</u>	2.1		2.1	
Waipā River SH3 Otorohanga	<u>180</u>	<u>175</u>	<u>130</u>	<u>3595</u>	3289	540	<u>18</u>	<u>17</u>	<u>5</u>	<u>36</u>	<u>34</u>	<u>20</u>	<u>1.11</u>	1.2		1.6	
Waipā River Pirongia-Ngutunui Rd br	<u>300</u>	<u>283</u>	<u>130</u>	<u>4875</u>	4441	540	<u>36</u>	<u>33</u>	<u>5</u>	<u>56</u>	<u>52</u>	<u>20</u>	<u>0.63</u>	0.7		1	
Waipā River at Whatawhata Bridge	<u>392</u>	<u>366</u>	<u>130</u>	<u>4003</u>	3657	540	<u>38</u>	<u>35</u>	<u>5</u>	<u>57</u>	<u>53</u>	<u>20</u>	<u>0.63</u>	<u>0.6</u>	<u>0.7</u>	1	
Ohote Stm Whatawhata/Horotiu Rd	<u>275</u>	<u>261</u>	<u>130</u>	<u>2320</u>	2142	540	<u>16</u>	<u>15</u>	<u>5</u>	<u>50</u>	<u>47</u>	<u>20</u>	<u>0.55</u>	0.6		1	
Kaniwhaniwha Stm Wright Rd	<u>250</u>	<u>238</u>	<u>130</u>	<u>2070</u>	1917	540	<u>26</u>	<u>24</u>	<u>5</u>	<u>43</u>	<u>41</u>	<u>20</u>	<u>0.87</u>	0.9		1	
Mangapiko Bowman Rd Stm	<u>325</u>	<u>306</u>	<u>130</u>	<u>7800</u>	7074	540	<u>27</u>	<u>25</u>	<u>5</u>	<u>59</u>	<u>55</u>	<u>20</u>	<u>0.61</u>	0.6		1	
Mangaohoi Stm South Branch Maru Rd	<u>70</u>	<u>70</u>	<u>70</u>	<u>987</u>	<u>943 942</u>	540	<u>8</u>	<u>8</u>	<u>5</u>	<u>18</u>	<u>18</u>	<u>18</u>	<u>1.58</u>	1.6		1.6	
Mangauika Stm Te Awamutu Borough W/S	<u>33</u>	<u>33</u>	<u>33</u>	<u>1060</u>	1008	540	<u>8</u>	<u>8</u>	<u>5</u>	<u>13</u>	<u>13</u>	<u>13</u>	<u>3.6</u>	<u>3.3</u>	<u>3.6</u>	<u>3.3</u>	<u>3.6</u>
Puniu River Bartons Corner Rd Br	<u>140</u>	<u>139</u>	<u>130</u>	<u>3040</u>	2790	540	<u>23</u>	<u>21</u>	<u>5</u>	<u>27</u>	<u>26</u>	<u>20</u>	<u>0.94</u>	<u>0.9</u>	<u>1</u>	1	
Mangatutu Stm Walker Rd Br	<u>160</u>	<u>157</u>	<u>130</u>	<u>760</u>	738	540	<u>11</u>	<u>10</u>	<u>5</u>	<u>24</u>	<u>24</u>	<u>20</u>	<u>1.53</u>	1.5		1.6	
Waitomo Stm SH31 Otorohanga	<u>310</u>	<u>292</u>	<u>130</u>	<u>1555</u>	1453	540	<u>31</u>	<u>28</u>	<u>5</u>	<u>59</u>	<u>55</u>	<u>20</u>	<u>0.59</u>	0.6		1	
Mangapu River Otorohanga	<u>480</u>	<u>445</u>	<u>130</u>	<u>4700</u>	4284	540	<u>47</u>	<u>43</u>	<u>5</u>	<u>66</u>	<u>61</u>	<u>20</u>	<u>0.61</u>	0.7		1	
Waitomo Stm Tumutumu Rd	<u>180</u>	<u>175</u>	<u>130</u>	<u>2430</u>	2241	540	<u>21</u>	<u>19</u>	<u>5</u>	<u>38</u>	<u>36</u>	<u>20</u>	<u>0.95</u>	<u>1.1</u>	<u>1.0</u>	1.6	
Mangaokewa Stm Lawrence Street Br	<u>490</u>	<u>454</u>	<u>130</u>	<u>6855</u>	6224	540	<u>43</u>	<u>39</u>	<u>5</u>	<u>83</u>	<u>77</u>	<u>20</u>	<u>1.1</u>	<u>1.4</u>	<u>1.2</u>	1.6	

Table 3.11-1(b) – Dissolved N and P Attribute States

	Median nitrate (mg/L)			95%ile nitrate (mg/L)			Median ammonia (mg/L)			Maximum ammonia (mg/L)			Median dissolved reactive phosphorus (mg/L)		
	<u>Curren</u> <u>t</u>	Short	80-year	<u>Curren</u> <u>t</u>	Short	80-year	<u>Curren</u> <u>t</u>	Short	80-year	<u>Curren</u> <u>t</u>	Short	80-year	<u>Curren</u> <u>t</u>	<u>Short</u>	<u>80-</u> <u>year</u>
Upper Waikato FMU															
Waikato River Ohaaki Br	<u>0.039</u>	0.039	0.039	<u>0.076</u>	0.062 <u>0.076</u>	0.062 <u>0.076</u>	<u>0.002</u>	0.002	0.002	<u>0.013</u>	0.013	0.013	<u>0.006</u>	<u>0.00</u> <u>6</u>	<u>0.00</u> <u>6</u>
Waikato River Ohakuri Tailrace Br	<u>0.086</u>	0.084 <u>0.086</u>	0.084 <u>0.086</u>	<u>0.177</u>	0.172 <u>0.177</u>	0.172 <u>0.177</u>	<u>0.003</u>	0.003	0.003	<u>0.017</u>	0.017	0.017	<u>0.009</u>	<u>0.00</u> <u>9</u>	<u>0.00</u> <u>9</u>
Waikato River Whakamaru Tailrace	<u>0.101</u>	0.101	0.101	<u>0.251</u>	0.230 <u>0.251</u>	0.230 <u>0.251</u>	<u>0.003</u>	0.003	0.003	<u>0.010</u>	0.010	0.010	<u>0.008</u>	<u>0.00</u> <u>8</u>	<u>0.00</u> <u>8</u>
Waikato River Waipāpa Tailrace	<u>0.164</u>	0.164	0.164	<u>0.320</u>	0.320	0.320	<u>0.007</u>	0.007	0.007	<u>0.016</u>	0.017 <u>0.016</u>	0.017 <u>0.016</u>	<u>0.016</u>	<u>0.01</u> <u>6</u>	<u>0.01</u> <u>6</u>
Pueto Stm Broadlands Rd Br	<u>0.450</u>	0.450	0.450	<u>0.536</u>	0.530 <u>0.536</u>	0.530 <u>0.536</u>	<u>0.003</u>	0.003	0.003	<u>0.009</u>	0.009	0.009	<u>0.074</u>	<u>0.07</u> <u>4</u>	<u>0.07</u> <u>4</u>
Torepatutahi Stm Vaile Rd Br	<u>0.500</u>	0.500	0.500	<u>0.825</u>	0.800 <u>0.825</u>	0.800 <u>0.825</u>	<u>0.002</u>	0.002	0.002	<u>0.011</u>	0.011	0.011	<u>0.082</u>	<u>0.08</u> <u>2</u>	<u>0.08</u> <u>2</u>
Waiotapu Stm Homestead Rd Br	<u>1.285</u>	1.257	1.000	<u>1.665</u>	1.563 <u>1.649</u>	1.500	<u>0.121</u>	0.112	0.030	<u>0.190</u>	0.176	0.050	<u>0.034</u>	<u>0.03</u> <u>4</u>	<u>0.03</u> <u>4</u>
Mangakara Stm (Reporoa) SH5	<u>1.300</u>	1.270	1.000	<u>1.675</u>	1.590 <u>1.658</u>	1.500	<u>0.008</u>	0.008	0.008	<u>0.063</u>	0.062	0.050	<u>0.048</u>	<u>0.04</u> <u>8</u>	<u>0.04</u> <u>8</u>
Kawaunui Stm SH5 Br	<u>2.600</u>	2.580	2.400	<u>3.100</u>	2.850 <u>3.100</u>	2.850 <u>3.100</u>	<u>0.006</u>	0.006	0.006	<u>0.083</u>	0.079 <u>0.080</u>	0.050	<u>0.054</u>	<u>0.05</u> <u>4</u>	<u>0.05</u> <u>4</u>
Waiotapu Stm Campbell Rd Br	<u>0.915</u>	0.915	0.915	<u>1.135</u>	1.100 <u>1.135</u>	1.100 <u>1.135</u>	<u>0.301</u>	0.291 <u>0.295</u>	0.240	<u>0.349</u>	0.315 <u>0.349</u>	0.050 <u>0.349</u>	<u>0.002</u>	<u>0.00</u> <u>2</u>	<u>0.00</u> <u>2</u>
Otamakokore Stm Hossack Rd	<u>0.740</u>	0.740	0.740	<u>1.360</u>	1.190 <u>1.360</u>	1.190 <u>1.360</u>	<u>0.006</u>	0.006	0.006	<u>0.025</u>	0.024 <u>0.025</u>	0.024 <u>0.025</u>	<u>0.153</u>	<u>0.15</u> <u>3</u>	<u>0.15</u> <u>3</u>
Whirinaki Stm Corbett Rd	<u>0.770</u>	0.770	0.770	<u>0.885</u>	0.870 <u>0.885</u>	0.870 <u>0.885</u>	<u>0.002</u>	0.002	0.002	<u>0.013</u>	0.012 <u>0.013</u>	0.012 <u>0.013</u>	<u>0.061</u>	<u>0.06</u> <u>1</u>	<u>0.06</u> <u>1</u>
Tahunaatara Stm Ohakuri Rd	<u>0.555</u>	0.555	0.555	<u>0.845</u>	0.830 <u>0.845</u>	0.830 <u>0.845</u>	<u>0.003</u>	0.003	0.003	<u>0.015</u>	0.015	0.015	<u>0.031</u>	<u>0.03</u> <u>1</u>	<u>0.03</u> <u>1</u>
Mangaharakeke Stm SH30	<u>0.525</u>	0.525	0.525	<u>0.795</u>	0.750 <u>0.795</u>	0.750 <u>0.795</u>	<u>0.003</u>	0.003	0.003	<u>0.015</u>	0.015	0.015	<u>0.031</u>	<u>0.03</u> <u>1</u>	<u>0.03</u> <u>1</u>
Waipāpa Stm (Mokai) Tirohanga Rd	<u>1.210</u>	1.189	1.000	<u>1.555</u>	1.500 <u>1.550</u>	1.5 <u>1.500</u>	<u>0.003</u>	0.003	0.003	<u>0.005</u>	0.005	0.005	<u>0.086</u>	<u>0.08</u> <u>6</u>	<u>0.08</u> <u>6</u>
Mangakino Stm Sandel Rd	<u>0.650</u>	0.650	0.650	<u>0.875</u>	0.860 <u>0.875</u>	0.860 <u>0.875</u>	<u>0.003</u>	0.003	0.003	<u>0.012</u>	0.012	0.012	<u>0.039</u>	<u>0.03</u> <u>9</u>	<u>0.03</u> <u>9</u>
Whakauru Stm SH1 Br	<u>0.260</u>	0.260	0.260	<u>0.461</u>	0.450 <u>0.461</u>	0.450 <u>0.461</u>	<u>0.003</u>	0.003	0.003	<u>0.033</u>	0.033	0.033	<u>0.019</u>	<u>0.01</u> <u>9</u>	<u>0.01</u> <u>9</u>
Mangamingi Stm Paraonui Rd	<u>2.800</u>	2.760	2.400	<u>3.400</u>	3.120 <u>3.400</u>	1.5 <u>3.400</u>	<u>0.098</u>	0.091	0.030	<u>0.323</u>	0.296	0.050	<u>0.290</u>	<u>0.29</u> <u>0</u>	<u>0.29</u> <u>0</u>

	Median nitrate (mg/L)			95%ile nitrate (mg/L)			Median ammonia (mg/L)			Maximum ammonia (mg/L)			Median dissolved reactive phosphorus (mg/L)		
	<u>Curren t</u>	Short	80-year	<u>Curren t</u>	Short	80-year	<u>Curren t</u>	Short	80-year	<u>Curren t</u>	Short	80-year	<u>Curren t</u>	Short	80- year
Pokaiwhenua Stm Arapuni - Putaruru	<u>1.755</u>	1.680	1.000	<u>2.200</u>	2.040 <u>2.130</u>	1.500	<u>0.002</u>	0.002	0.002	<u>0.020</u>	0.020	0.020	<u>0.087</u>	0.08 <u>7</u>	0.08 <u>7</u>
Little Waipā Stm Arapuni - Putaruru	<u>1.580</u>	1.522	1.000	<u>2.150</u>	2.040 <u>2.085</u>	1.500	<u>0.002</u>	0.002	0.002	<u>0.089</u>	0.085	0.050	<u>0.051</u>	0.05 <u>1</u>	0.05 <u>1</u>
Middle Waikato FMU															
Waikato River Narrows Boat Ramp	<u>0.235</u>	0.235	0.235	<u>0.545</u>	0.500 <u>0.545</u>	0.500 <u>0.545</u>	<u>0.010</u>	0.009 <u>0.010</u>	0.009 <u>0.010</u>	<u>0.018</u>	0.018	0.018	<u>0.015</u>	0.01 <u>5</u>	0.01 <u>5</u>
Waikato River Horotiu Br	<u>0.260</u>	0.260	0.260	<u>0.550</u>	0.530 <u>0.550</u>	0.530 <u>0.550</u>	<u>0.007</u>	0.007	0.007	<u>0.029</u>	0.029	0.029	<u>0.019</u>	0.01 <u>9</u>	0.01 <u>9</u>
Karapiro Stm Hickey Rd Bridge	<u>0.520</u>	0.520	0.520	<u>1.760</u>	1.689 <u>1.734</u>	1.500	<u>0.008</u>	0.008	0.008	<u>0.031</u>	0.031	0.031	<u>0.042</u>	0.04 <u>2</u>	0.04 <u>2</u>
Mangawhero Stm Cambridge-Ohaupo	<u>2.100</u>	1.990	1.000	<u>2.720</u>	2.490 <u>2.598</u>	1.500	<u>0.042</u>	0.041	0.030	<u>0.074</u>	0.072	0.050	<u>0.040</u>	0.04 <u>0</u>	0.04 <u>0</u>
Mangaonua Stm Hoeka Rd	<u>1.505</u>	1.455	1.000	<u>2.100</u>	1.878 <u>2.040</u>	1.500	<u>0.037</u>	0.036	0.030	<u>0.051</u>	0.051	0.050	<u>0.012</u>	0.01 <u>2</u>	0.01 <u>2</u>
Mangaone Stm Annebrooke Rd Br	<u>2.600</u>	2.580	2.400	<u>3.200</u>	2.940 <u>3.200</u>	1.5 <u>3.200</u>	<u>0.009</u>	0.009	0.009	<u>0.020</u>	0.020	0.020	<u>0.063</u>	0.06 <u>3</u>	0.06 <u>3</u>
Mangakotukutuku Stm Peacockes Rd	<u>0.800</u>	0.800	0.800	<u>2.350</u>	1.788 <u>2.265</u>	1.500	<u>0.082</u>	0.077	0.030	<u>0.141</u>	0.132	0.050	<u>0.213</u>	0.21 <u>3</u>	0.21 <u>3</u>
Waitawhiriwhiri Stm Edgumbe Street	<u>0.880</u>	0.880	0.880	<u>1.265</u>	1.240 <u>1.265</u>	1.24 <u>1.265</u>	<u>0.258</u>	0.256	0.240	<u>0.346</u>	0.318 <u>0.346</u>	0.05 <u>0.346</u>	<u>0.031</u>	0.03 <u>1</u>	0.03 <u>1</u>
Kirikiroa Stm Tauhara Dr	<u>0.815</u>	0.815	0.815	<u>1.975</u>	1.572 <u>1.928</u>	1.500	<u>0.104</u>	0.096 <u>0.097</u>	0.030	<u>0.198</u>	0.183	0.050	<u>0.014</u>	0.01 <u>4</u>	0.01 <u>4</u>
Lower Waikato FMU															
Waikato River Huntly-Tainui Br	<u>0.365</u>	0.365	0.365	<u>1.010</u>	0.900 <u>1.010</u>	0.900 <u>1.010</u>	<u>0.005</u>	0.005	0.005	<u>0.015</u>	0.015	0.015	<u>0.020</u>	0.02 <u>0</u>	0.02 <u>0</u>
Waikato River Mercer Br	<u>0.365</u>	0.365	0.365	<u>0.895</u>	0.870 <u>0.895</u>	0.870 <u>0.895</u>	<u>0.003</u>	0.003	0.003	<u>0.011</u>	0.010 <u>0.011</u>	0.010 <u>0.011</u>	<u>0.016</u>	0.01 <u>6</u>	0.01 <u>6</u>
Waikato River Tuakau Br	<u>0.325</u>	0.325	0.325	<u>0.890</u>	0.880 <u>0.890</u>	0.880 <u>0.890</u>	<u>0.003</u>	0.003	0.003	<u>0.008</u>	0.008	0.008	<u>0.014</u>	0.01 <u>4</u>	0.01 <u>4</u>
Komakorau Stm Henry Rd	<u>1.310</u>	1.310	1.310	<u>5.300</u>	4.400 <u>5.120</u>	3.500	<u>0.251</u>	0.250	0.240	<u>0.421</u>	0.419	0.400	<u>0.010</u>	0.01 <u>0</u>	0.01 <u>0</u>
Mangawara Stm Rutherford Rd Br	<u>0.765</u>	0.765	0.765	<u>3.350</u>	2.760 <u>3.165</u>	1.500	<u>0.111</u>	0.103	0.030	<u>0.185</u>	0.172	0.050	<u>0.047</u>	0.04 <u>7</u>	0.04 <u>7</u>
Awaroa Stm (Rotorua) Sansons Br	<u>0.700</u>	0.700	0.700	<u>1.390</u>	1.190 <u>1.390</u>	1.190 <u>1.390</u>	<u>0.024</u>	0.021 <u>0.024</u>	0.021 <u>0.024</u>	<u>0.093</u>	0.089	0.050	<u>0.002</u>	0.00 <u>2</u>	0.00 <u>2</u>

	Median nitrate (mg/L)			95%ile nitrate (mg/L)			Median ammonia (mg/L)			Maximum ammonia (mg/L)			Median dissolved reactive phosphorus (mg/L)		
	<u>Curren t</u>	Short	80-year	<u>Curren t</u>	Short	80-year	<u>Curren t</u>	Short	80-year	<u>Curren t</u>	Short	80-year	<u>Curren t</u>	Short	80- year
Matahuru Stm Waiterimu Road	<u>0.715</u>	0.715	0.715	<u>1.905</u>	1.689 1.865	1.500	<u>0.017</u>	0.016 0.017	0.016 0.017	<u>0.060</u>	0.059	0.050	<u>0.023</u>	0.02 3	0.02 3
Whangape Stm Rangiriri-Glen Murray Rd	<u>0.004</u>	0.004	0.004	<u>0.795</u>	0.690 0.795	0.690 0.795	<u>0.008</u>	0.006 0.008	0.006 0.008	<u>0.143</u>	0.134	0.050	<u>0.002</u>	0.00 2	0.00 2
Waerenga Stm SH2 Maramarua	<u>0.820</u>	0.820	0.820	<u>1.420</u>	1.410 1.420	1.410 1.420	<u>0.005</u>	0.005	0.005	<u>0.023</u>	0.022 0.023	0.022 0.023	<u>0.019</u>	0.01 9	0.01 9
Whangamarino River Jefferies Rd Br	<u>0.625</u>	0.625	0.625	<u>2.500</u>	1.842 2.400	1.500	<u>0.011</u>	0.011	0.011	<u>0.055</u>	0.055	0.050	<u>0.030</u>	0.03 0	0.03 0
Mangatangi River SH2 Maramarua	<u>0.110</u>	0.110	0.110	<u>1.290</u>	1.120 1.290	1.120 1.290	<u>0.006</u>	0.005 0.006	0.005 0.006	<u>0.038</u>	0.038	0.038	<u>0.021</u>	0.02 1	0.02 1
Mangatawhiri River Lyons Rd Buckingham Br	<u>0.013</u>	0.013	0.013	<u>0.400</u>	0.370 0.400	0.370 0.400	<u>0.003</u>	0.003	0.003	<u>0.011</u>	0.011	0.011	<u>0.011</u>	0.01 1	0.01 1
Whangamarino River Island Block Rd	<u>0.075</u>	0.075	0.075	<u>0.865</u>	0.700 0.865	0.700 0.865	<u>0.013</u>	0.011 0.013	0.011 0.013	<u>0.158</u>	0.147	0.050	<u>0.006</u>	0.00 6	0.00 6
Whakapipi Stm SH22 Br	<u>3.500</u>	3.390	2.400	<u>5.350</u>	5.120 5.165	3.500	<u>0.006</u>	0.006	0.006	<u>0.084</u>	0.081	0.050	<u>0.022</u>	0.02 2	0.02 2
Ohaeroa Stm SH22 Br	<u>1.525</u>	1.473	1.000	<u>1.915</u>	1.806 1.874	1.500	<u>0.003</u>	0.003	0.003	<u>0.015</u>	0.015	0.015	<u>0.008</u>	0.00 8	0.00 8
Opuatia Stm Ponganui Rd	<u>0.740</u>	0.740	0.740	<u>1.081</u>	1.060 1.081	1.060 1.081	<u>0.005</u>	0.005	0.005	<u>0.016</u>	0.016	0.016	<u>0.006</u>	0.00 6	0.00 6
Awaroa River (Waiuku) Otatau Rd Br Moseley	<u>1.410</u>	1.369	1.000	<u>2.500</u>	2.310 2.400	1.500	<u>0.022</u>	0.021 0.022	0.021 0.022	<u>0.144</u>	0.135	0.050	<u>0.004</u>	0.00 4	0.00 4
Waipā River FMU															
Waipā River Mangaokewa Rd	<u>0.380</u>	0.380	0.380	<u>0.710</u>	0.600 0.710	0.600 0.710	<u>0.003</u>	0.003	0.003	<u>0.017</u>	0.017	0.017	<u>0.005</u>	0.00 5	0.00 5
Waipā River at Otewa	<u>0.228</u>	0.228	0.228	<u>0.504</u>	0.502 0.504	0.502 0.504	<u>0.003</u>	0.003	0.003	<u>0.008</u>	0.008	0.008	<u>0.008</u>	0.00 8	0.00 8
Waipā River SH3 Otorohanga	<u>0.370</u>	0.370	0.370	<u>1.150</u>	1.050 1.150	1.050 1.150	<u>0.004</u>	0.004	0.004	<u>0.020</u>	0.020	0.020	<u>0.008</u>	0.00 8	0.00 8
Waipā River Pirongia-Ngutunui Rd br	<u>0.565</u>	0.565	0.565	<u>1.535</u>	1.270 1.532	1.270 1.500	<u>0.008</u>	0.008	0.008	<u>0.023</u>	0.023	0.023	<u>0.014</u>	0.01 4	0.01 4
Waipā River at Whatawhata Bridge	<u>0.673</u>	0.673	0.673	<u>1.587</u>	1.319 1.578	1.319 1.500	<u>0.009</u>	0.009	0.009	<u>0.026</u>	0.026	0.026	<u>0.018</u>	0.01 8	0.01 8

	Median nitrate (mg/L)			95th nitrate (mg/L)			Median ammonia (mg/L)			Maximum ammonia (mg/L)			Median dissolved reactive phosphorus (mg/L)		
	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year
Ohote Stm Whatawhata/Horotiu Rd	<u>0.495</u>	0.495	0.495	<u>1.385</u>	1.370 <u>1.385</u>	1.370 <u>1.385</u>	<u>0.023</u>	0.023	0.023	<u>0.052</u>	0.052	0.050	<u>0.020</u>	<u>0.020</u>	<u>0.020</u>
Kaniwhaniwha Stm Wright Rd	<u>0.350</u>	0.350	0.350	<u>0.995</u>	0.890 <u>0.995</u>	0.890 <u>0.995</u>	<u>0.007</u>	0.007	0.007	<u>0.022</u>	0.022	0.022	<u>0.007</u>	<u>0.007</u>	<u>0.007</u>
Mangapiko Bowman Rd Stm	<u>1.410</u>	1.369	1.000	<u>2.650</u>	2.490 <u>2.535</u>	1.500	<u>0.022</u>	0.022	0.022	<u>0.078</u>	0.076 <u>0.075</u>	0.03 <u>0.050</u>	<u>0.115</u>	<u>0.115</u>	<u>0.115</u>
Mangaohoi Stm South Branch Maru Rd	<u>0.230</u>	0.230	0.230	<u>0.415</u>	0.390 <u>0.415</u>	0.390 <u>0.415</u>	<u>0.003</u>	0.003	0.003	<u>0.008</u>	0.008	0.008	<u>0.043</u>	<u>0.043</u>	<u>0.043</u>
Mangauika Stm Te Awamutu Borough W/S	<u>0.210</u>	0.210	0.210	<u>0.286</u>	0.280 <u>0.286</u>	0.280 <u>0.286</u>	<u>0.002</u>	0.002	0.002	<u>0.003</u>	0.003	0.003	<u>0.002</u>	<u>0.002</u>	<u>0.002</u>
Puniu River Bartons Corner Rd Br	<u>0.650</u>	0.650	0.650	<u>1.305</u>	1.280 <u>1.305</u>	1.280 <u>1.305</u>	<u>0.007</u>	0.007	0.007	<u>0.029</u>	0.029	0.029	<u>0.022</u>	<u>0.022</u>	<u>0.022</u>
Mangatutu Stm Walker Rd Br	<u>0.380</u>	0.380	0.380	<u>0.908</u>	0.880 <u>0.908</u>	0.880 <u>0.908</u>	<u>0.003</u>	0.003	0.003	<u>0.012</u>	0.012	0.012	<u>0.009</u>	<u>0.009</u>	<u>0.009</u>
Waitomo Stm SH31 Otorohanga	<u>0.520</u>	0.520	0.520	<u>0.925</u>	0.830 <u>0.925</u>	0.830 <u>0.925</u>	<u>0.008</u>	0.008	0.008	<u>0.026</u>	0.025 <u>0.026</u>	0.025 <u>0.026</u>	<u>0.006</u>	<u>0.006</u>	<u>0.006</u>
Mangapu River Otorohanga	<u>0.860</u>	0.860	0.860	<u>1.428</u>	1.360 <u>1.428</u>	1.360 <u>1.428</u>	<u>0.016</u>	0.015 <u>0.016</u>	0.015 <u>0.016</u>	<u>0.064</u>	0.057 <u>0.063</u>	0.050	<u>0.023</u>	<u>0.023</u>	<u>0.023</u>
Waitomo Stm Tumutumu Rd	<u>0.630</u>	0.630	0.630	<u>0.825</u>	0.800 <u>0.825</u>	0.800 <u>0.825</u>	<u>0.004</u>	0.004	0.004	<u>0.013</u>	0.013	0.013	<u>0.010</u>	<u>0.010</u>	<u>0.010</u>
Mangaokewa Stm Lawrence Street Br	<u>0.525</u>	0.530 <u>0.525</u>	0.530 <u>0.525</u>	<u>1.060</u>	0.980 <u>1.060</u>	0.980 <u>1.060</u>	<u>0.005</u>	0.004 <u>0.005</u>	0.004 <u>0.005</u>	<u>0.014</u>	0.013 <u>0.014</u>	0.013 <u>0.014</u>	<u>0.014</u>	<u>0.014</u>	<u>0.014</u>

Table 3.11-1(c) – Chlorophyll, TN and TP Attribute States

	Median Chlorophyll a (mg/m ³)			Maximum Chlorophyll a (mg/m ³)			Median Total Nitrogen (mg/m ³)			Median Total Phosphorus (mg/m ³)		
	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year
Upper Waikato FMU												
Waikato River Ohaaki Br	<u>1.5</u>	1.5	1.5	<u>13</u>	13	13	<u>134</u>	134	134	<u>10</u>	10	10
Waikato River Ohakuri Tailrace Br	<u>3.1</u>	3.2 <u>3.1</u>	3.2 <u>3.1</u>	<u>11</u>	11	11	<u>216</u>	206 <u>216</u>	216 <u>160</u>	<u>17</u>	17	17
Waikato River Whakamaru Tailrace			5.0			25	<u>271</u>	271 <u>260</u>	271 <u>160</u>	<u>20</u>	20	20
Waikato River Waipapa Tailrace	<u>4.0</u>	4.1 <u>4.0</u>	4.1 <u>4.0</u>	<u>25</u>	25	25	<u>336</u>	332 <u>318</u>	300 <u>160</u>	<u>25</u>	25	20
Pueto Stm Broadlands Rd Br							<u>540</u>			<u>93</u>		
Torepatutahi Stm Vaile Rd Br							<u>625</u>			<u>96</u>		
Waiotapu Stm Homestead Rd Br							<u>1860</u>			<u>100</u>		

	Median Chlorophyll a (mg/m ³)			Maximum Chlorophyll a (mg/m ³)			Median Total Nitrogen (mg/m ³)			Median Total Phosphorus (mg/m ³)		
	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year	Current	Short	80-year
Mangakara Stm (Reporoa) SH5							<u>1580</u>			<u>74</u>		
Kawaunui Stm SH5 Br							<u>2990</u>			<u>82</u>		
Waiotapu Stm Campbell Rd Br							<u>1955</u>			<u>72</u>		
Otamakokore Stm Hossack Rd							<u>990</u>			<u>144</u>		
Whirinaki Stm Corbett Rd							<u>810</u>			<u>62</u>		
Tahunaatara Stm Ohakuri Rd							<u>780</u>			<u>44</u>		
Mangaharakeke Stm SH30							<u>685</u>			<u>48</u>		
Waipāpa Stm (Mokai) Tirohanga Rd							<u>1355</u>			<u>95</u>		
Mangakino Stm Sandel Rd							<u>760</u>			<u>47</u>		
Whakauru Stm SH1 Br							<u>470</u>			<u>42</u>		
Mangamingi Stm Paraonui Rd							<u>3495</u>			<u>325</u>		
Pokaiwhenua Stm Arapuni - Putaruru							<u>2010</u>			<u>106</u>		
Little Waipā Stm Arapuni - Putaruru							<u>1780</u>			<u>68</u>		
Middle Waikato FMU												
Waikato River Narrows Boat Ramp	<u>5.5</u>	5.5	5.0	<u>23</u>	23	23	<u>410</u>	<u>410 404</u>	<u>410 350</u>	<u>28</u>	<u>28-27</u>	20
Waikato River Horotiu Br	<u>6.0</u>	<u>6.1 5.9</u>	5.0	<u>23</u>	23	23	<u>441</u>	<u>441 432</u>	<u>441 350</u>	<u>36</u>	34	20
Karapiro Stm Hickey Rd Bridge							<u>860</u>			<u>86</u>		
Mangawhero Stm Cambridge-Ohaupo							<u>2930</u>			<u>163</u>		
Mangaonua Stm Hoeka Rd							<u>1905</u>			<u>52</u>		
Mangaone Stm Annebrooke Rd Br							<u>3060</u>			<u>118</u>		
Mangakotukutuku Stm Peacockes Rd							<u>1875</u>			<u>415</u>		
Waitawhiriwhiri Stm Edgecumbe Street							<u>2110</u>			<u>91</u>		
Kirikiroa Stm Tauhara Dr							<u>1490</u>			<u>63</u>		
Lower Waikato FMU												
Waikato River Huntly-Tainui Br	<u>6.0</u>	5.9	5.0	<u>19</u>	19	19	<u>585</u>	<u>577 562</u>	<u>500 350</u>	<u>45</u>	43	20
Waikato River Mercer Br	<u>10.5</u>	10.0	5.0	<u>30</u>	30	25	<u>662</u>	<u>646 634</u>	<u>500 350</u>	<u>52</u>	49	20
Waikato River Tuakau Br	<u>12.0</u>	11.3	5.0	<u>38</u>	37	25	<u>595</u>	<u>586 574</u>	<u>500 350</u>	<u>52</u>	<u>50 49</u>	20
Komakorau Stm Henry Rd							<u>2900</u>			<u>90</u>		
Mangawara Stm Rutherford Rd Br							<u>1890</u>			<u>210</u>		
Awaroa Stm (Rotowaro) Sansons Br							<u>990</u>			<u>12</u>		
Matahuru Stm Waiterimu Road							<u>1310</u>			<u>98</u>		
Whangape Stm Rangiriri-Glen Murray Rd							<u>2116</u>			<u>122</u>		
Waerenga Stm SH2 Maramarua							<u>1115</u>			<u>46</u>		
Whangamarino River Jefferies Rd Br							<u>1085</u>			<u>88</u>		
Mangatangi River SH2 Maramarua							<u>493</u>			<u>72</u>		
Mangatawhiri River Lyons Rd Buckingham Br							<u>181</u>			<u>23</u>		
Whangamarino River Island Block Rd							<u>1831</u>			<u>152</u>		
Whakapipi Stm SH22 Br							<u>3875</u>			<u>51</u>		
Ohaeroa Stm SH22 Br							<u>1825</u>			<u>26</u>		
Opuatia Stm Ponganui Rd							<u>1070</u>			<u>31</u>		

	Median Chlorophyll a (mg/m ³)			Maximum Chlorophyll a (mg/m ³)			Median Total Nitrogen (mg/m ³)			Median Total Phosphorus (mg/m ³)		
	<u>Current</u>	Short	80-year	<u>Current</u>	Short	80-year	<u>Current</u>	Short	80-year	<u>Current</u>	Short	80-year
Awaroa River (Waiuku) Otatau Rd Br Moseley							<u>2095</u>			<u>46</u>		
Waipā River FMU												
Waipā River Mangaokewa Rd							<u>585</u>			<u>16</u>		
Waipā River at Otewa							<u>366</u>			<u>20</u>		
Waipā River SH3 Otorohanga							<u>600</u>			<u>22</u>		
Waipā River Pirongia-Ngutunui Rd br							<u>860</u>			<u>48</u>		
Waipā River at Whatawhata Bridge							<u>912</u>			<u>70</u>		
Ohote Stm Whatawhata/Horotiu Rd							<u>1320</u>			<u>76</u>		
Kaniwhaniwha Stm Wright Rd							<u>590</u>			<u>29</u>		
Mangapiko Bowman Rd Stm							<u>2095</u>			<u>240</u>		
Mangaohoi Stm South Branch Maru Rd							<u>365</u>			<u>52</u>		
Mangauika Stm Te Awamutu Borough W/S							<u>275</u>			<u>8</u>		
Puniu River Bartons Corner Rd Br							<u>910</u>			<u>48</u>		
Mangatutu Stm Walker Rd Br							<u>510</u>			<u>20</u>		
Waitomo Stm SH31 Otorohanga							<u>755</u>			<u>30</u>		
Mangapu River Otorohanga							<u>1240</u>			<u>60</u>		
Waitomo Stm Tumutumu Rd							<u>765</u>			<u>22</u>		
Mangaokewa Stm Lawrence Street Br							<u>775</u>			<u>36</u>		

¹ The annual median and annual maximum ammonia have been adjusted for pH

² Median black disc horizontal sighting range under baseflow conditions

³ Attribute is not applicable to the sub-catchment

⁴ The ammonia maximum is the average of five annual maxima.

Upper Waikato River Freshwater Management Unit

Catchment number ¹⁸⁷	Site	Attributes																			
		Annual Median Chlorophyll-a (mg/m ³)		Annual Maximum Chlorophyll-a (mg/m ³)		Annual Median Total Nitrogen (mg/m ³)		Annual Median Total Phosphorus (mg/m ³)		Annual Median Nitrate (mg NO ₃ -N/L)		Annual 95 th percentile Nitrate (mg NO ₃ -N/L)		Annual Median Ammonia ¹ (mg-NH ₄ -N/L)		Annual Maximum Ammonia ¹ (mg-NH ₄ -N/L)		95 th percentile E-coli (E-coli/100mL)		Clarity (m) ²	
		short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year
73	Waikato River Ohaaki Br	1.5	1.5	13	13	134	134	10	10	0.039	0.039	0.062	0.062	0.002	0.002	0.013	0.013	70	70	3.8	3.8
66	Waikato River Ohakuri Tailrace Br	3.2	3.2	11	11	206	160	17	17	0.084	0.084	0.172	0.172	0.003	0.003	0.017	0.017	15	15	3.4	3.4
67	Waikato River Whakamaru Tailrace	-	5	-	25	260	160	20	20	0.101	0.101	0.230	0.230	0.003	0.003	0.010	0.010	60	60	2.0	3.0
64	Waikato River Waipapa Tailrace	4.1	4.1	25	25	318	160	25	20	0.164	0.164	0.320	0.320	0.007	0.007	0.017	0.017	162	162	2.0	3.0
74	Pueto Stm Broadlands Rd Br	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.450	0.450	0.530	0.530	0.003	0.003	0.009	0.009	92	92	1.8	3.0
72	Torepatutahi Stm Vaile Rd Br	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.500	0.500	0.800	0.800	0.002	0.002	0.011	0.011	216	216	-	-
65	Waiotapu Stm Homestead Rd Br	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	1.257	1.0	1.563	1.5	0.112	0.03	0.176	0.05	281	281	-	-

Catchment number	Site	Attributes																			
		Annual Median Chlorophyll-a (mg/m ³)		Annual Maximum Chlorophyll-a (mg/m ³)		Annual Median Total Nitrogen (mg/m ³)		Annual Median Total Phosphorus (mg/m ³)		Annual Median Nitrate (mg NO ₃ -N/L)		Annual 95 th percentile Nitrate (mg NO ₃ -N/L)		Annual Median Ammonia ¹ (mg-NH ₄ -N/L)		Annual Maximum Ammonia ¹ (mg-NH ₄ -N/L)		95 th percentile E-coli (E-coli/100mL)		Clarity (m) ²	
		short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year
69	Mangakara Stm (Reporoa) SH5	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	1.270	1.0	1.590	1.5	0.008	0.008	0.062	0.05	1584	540	0.9	1.0

¹⁸⁷ Wairakei Pastoral Ltd PC1-11391

<u>45</u>	Pokaiwhenua Stm Arapuni- Putaruru Rd	<u>NA³</u>	<u>NA³</u>		<u>NA³</u>		<u>NA³</u>	<u>NA³</u>	<u>NA³</u>	1.680	1.0	2.040	1.5	0.002	0.002	0.020	0.020	1363	540	1.3	1.6
<u>44</u>	Little Waipā Stm Arapuni- Putaruru Rd	<u>NA³</u>	<u>NA³</u>		<u>NA³</u>		<u>NA³</u>	<u>NA³</u>	<u>NA³</u>	1.522	1.0	2.040	1.5	0.002	0.002	0.085	0.05	1377	540	1.5	1.6

¹The annual median and annual maximum ammonia have been adjusted for pH

²Median black disc horizontal sighting range under baseflow conditions

³Attribute is not applicable to the sub-catchment

Table 3.11-1: Middle Waikato River Freshwater Management Unit

Catchment number	Site	Attributes																			
		Annual Median Chlorophyll-a (mg/m ³)		Annual Maximum Chlorophyll-a (mg/m ³)		Annual Median Total Nitrogen (mg/m ³)		Annual Median Total Phosphorus (mg/m ³)		Annual Median Nitrate (mg NO ₃ -N/L)		Annual 95 th percentile Nitrate (mg NO ₃ -N/L)		Annual Median Ammonia ¹ (mg NH ₄ -N/L)		Annual Maximum Ammonia ¹ (mg NH ₄ -N/L)		95 th percentile E-coli (E-coli/100mL)		Clarity (m) ²	
		short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year
—33	Waikato River Narrows Boat Ramp	5.5	5	23	23	404	350	28	20	0.235	0.235	0.500	0.500	0.009	0.009	0.018	0.018	340	260	1.7	1.7
—25	Waikato River Horotiu Br	6.1	5	23	23	432	350	34	20	0.260	0.260	0.530	0.530	0.007	0.007	0.029	0.029	774	540	1.4	1.6
—32	Karapiro Stm Hickey Rd Bridge	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.520	0.520	1.689	1.5	0.008	0.008	0.031	0.031	4518	540	0.9	1.0
—35	Mangawhero Stm Cambridge-Ohaupo Rd	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	1.990	1.0	2.490	1.5	0.041	0.03	0.072	0.05	2920	540	0.3	1.0
—29	Mangaonua Stm Hoeka Rd	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	1.455	1.0	1.878	1.5	0.036	0.03	0.051	0.05	6372	540	1.0	1.0
—31	Mangaone Stm Annebrooke Rd Br	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	2.580	2.4	2.940	1.5	0.009	0.009	0.02	0.02	2052	540	0.9	1.0
—30	Mangakotukutuku Stm Peacockes Rd	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.800	0.800	1.788	1.5	0.077	0.03	0.132	0.05	11394	540	0.5	1.0

Catchment number	Site	Attributes									
		Annual Median Chlorophyll-a (mg/m ³)	Annual Maximum Chlorophyll-a (mg/m ³)	Annual Median Total Nitrogen (mg/m ³)	Annual Median Total Phosphorus (mg/m ³)	Annual Median Nitrate (mg NO ₃ -N/L)	Annual 95 th percentile Nitrate (mg NO ₃ -N/L)	Annual Median Ammonia ¹ (mg NH ₄ -N/L)	Annual Maximum Ammonia ¹ (mg NH ₄ -N/L)	95 th percentile E-coli (E-coli/100mL)	Clarity (m) ²

| | | short term | 80 year | short term | 80 year | short term | 80 year | short term | 80 year | short term | 80 year | short term | 80 year | short term | 80 year |
|-----------|-------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|
| <u>28</u> | Waitawhiriwhiri Stm Edgcumbe Street | NA ³ | 0.880 | 0.880 | 1.240 | 1.24 | 0.256 | 0.24 | 0.318 | 0.05 | 5922 | 540 | 0.4 | 1.0 |
| <u>23</u> | Kirikiroa Stm Tauhara Dr | NA ³ | 0.815 | 0.815 | 1.572 | 1.5 | 0.096 | 0.03 | 0.183 | 0.05 | 2124 | 540 | 0.5 | 1.0 |

¹The annual median and annual maximum ammonia have been adjusted for pH

²Median black disc horizontal sighting range under baseflow conditions

³Attribute is not applicable to the sub-catchment

Table 3.11-1: Lower Waikato River Freshwater Management Unit

Catchment number	Site	Attributes																			
		Annual Median Chlorophyll-a (mg/m ³)		Annual Maximum Chlorophyll-a (mg/m ³)		Annual Median Total Nitrogen (mg/m ³)		Annual Median Total Phosphorus (mg/m ³)		Annual Median Nitrate (mg NO ₃ -N/L)		Annual 95 th percentile Nitrate (mg NO ₃ -N/L)		Annual Median Ammonia ¹ (mg NH ₄ -N/L)		Annual Maximum Ammonia ¹ (mg NH ₄ -N/L)		95 th percentile E. coli (E.coli/100mL)		Clarity (m) ²	
		short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year
<u>20</u>	Waikato River Huntly-Tainui Br	5.9	5	19	19	562	350	43	20	0.365	0.365	0.900	0.900	0.005	0.005	0.015	0.015	1944	540	0.9	1.0
<u>9</u>	Waikato River Mercer Br	10.0	5	30	25	631	350	49	20	0.365	0.365	0.870	0.870	0.003	0.003	0.010	0.010	1494	540	-	-
<u>4</u>	Waikato River Tuakau Br	11.3	5	37	25	571	350	50	20	0.325	0.325	0.880	0.880	0.003	0.003	0.008	0.008	1584	540	0.7	1.0
<u>22</u>	Komakorau Stm Henry Rd	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	1.279	1.0	4.400	3.5	0.250	0.24	0.419	0.40	3474	540	0.3	1.0
<u>17</u>	Mangawara Stm Rutherford Rd Br	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.765	0.765	2.760	1.5	0.103	0.03	0.172	0.05	4955	540	0.3	1.0

		Attributes																			
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Catchment number	Site	Annual Median Chlorophyll-a (mg/m ³)		Annual Maximum Chlorophyll-a (mg/m ³)		Annual Median Total Nitrogen (mg/m ³)		Annual Median Total Phosphorus (mg/m ³)		Annual Median Nitrate (mg NO ₃ -N/L)		Annual 95 th percentile Nitrate (mg NO ₃ -N/L)		Annual Median Ammonia ¹ (mg NH ₄ -N/L)		Annual Maximum Ammonia ¹ (mg NH ₄ -N/L)		95 th percentile E-coli (E.coli/100mL)		Clarity (m) ²	
		short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year	short term	80 year
19	Awaroa-Stm (Rotowaro) Sansons Br @ Rotowaro-Huntly Rd	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.700	0.700	1.190	1.190	0.021	0.021	0.089	0.05	1800	540	0.8	1.0
14	Matahuru-Stm Waiterimu Road Below Confluence	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.715	0.715	1.689	1.5	0.016	0.016	0.059	0.05	6147	540	0.4	1.0
16	Whangape-Stm Rangiriri-Glen Murray Rd	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.004	0.004	0.690	0.690	0.006	0.006	0.134	0.05	584	540	0.3	1.0
12	Waerenga-Stm-SH2 Maramarua Taniwha Rd ¹⁸⁸	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.820	0.820	1.410	1.410	0.005	0.005	0.022	0.022	5098	540	0.9	1.0
8	Whangamarino River Jefferies Rd Br	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.625	0.625	1.842	1.5	0.012	0.012	0.147	0.05	4712	540	0.6	1.0
2	Mangatangi River SH2 Maramarua	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.110	0.110	1.120	1.120	0.005	0.005	0.038	0.038	5567	540	0.5	1.0
1	Mangatawhiri River Lyons Rd Buckingham Br	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.013	0.013	0.370	0.370	0.003	0.003	0.011	0.011	5108	540	1.6	1.6
10	Whangamarino River Island Block Rd	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	NA ³	0.075	0.075	0.700	0.700	0.011	0.011	0.054	0.05	655	540	0.3	1.0

Catchment number	Site	Attributes																			
		Annual Median Chlorophyll-a (mg/m ³)	Annual Maximum Chlorophyll-a (mg/m ³)	Annual Median Total Nitrogen (mg/m ³)	Annual Median Total Phosphorus (mg/m ³)	Annual Median Nitrate (mg NO ₃ -N/L)	Annual 95 th percentile Nitrate (mg NO ₃ -N/L)	Annual Median Ammonia ¹ (mg NH ₄ -N/L)	Annual Maximum Ammonia ¹ (mg NH ₄ -N/L)	95 th percentile E-coli (E.coli/100mL)	Clarity (m) ²										
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

¹⁸⁸ Waikato Regional Council PC1-3635

| | - | short term | 80 year | short term | 80 year | short term | 80 year | short term | 80 year | short term | 80 year | short term | 80 year | short term | 80 year |
|----|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|
| 3 | Whakapipi Stm
SH22 Br | NA ³ | 3.390 | 2.4 | 5.120 | 3.5 | 0.006 | 0.006 | 0.081 | 0.05 | 1773 | 540 | 1.1 | 1.1 |
| 7 | Ohaeroa Stm
SH22 Br | NA ³ | 1.473 | 1.0 | 1.806 | 1.5 | 0.003 | 0.003 | 0.015 | 0.015 | 4667 | 540 | 0.8 | 1.0 |
| 11 | Opuatia Stm
Ponganui Rd | NA ³ | 0.740 | 0.740 | 1.060 | 1.060 | 0.005 | 0.005 | 0.016 | 0.016 | 2898 | 540 | 0.6 | 1.0 |
| 5 | Awaroa River
(Waiuku)-Otaua Rd
Br Moseley Rd | NA ³ | 1.369 | 1.0 | 2.310 | 1.5 | 0.021 | 0.021 | 0.135 | 0.05 | 1017 | 540 | 0.4 | 1.0 |

¹The annual median and annual maximum ammonia have been adjusted for pH

²Median black disc horizontal sighting range under baseflow conditions

³Attribute is not applicable to the sub-catchment

Table 3.11-1: Waipā River Freshwater Management Unit

Catchment number	Site	Attributes											
		Annual Median Nitrate (mg NO ₃ -N/L)		Annual 95 th -percentile Nitrate (mg NO ₃ -N/L)		Annual Median Ammonia ¹ (mg NH ₄ -N/L)		Annual Maximum Ammonia ¹ (mg NH ₄ -N/L)		95 th -percentile E. coli (E. coli/100mL)		Clarity (m) ²	
		short term	80-year	short term	80-year	short term	80-year	short term	80-year	short term	80-year	short term	80-year
68	Waipā River Mangaokewa Rd	0.380	0.380	0.600	0.600	0.003	0.003	0.017	0.017	2417	540	1.5	1.6
60	Waipā River Otewa	0.228	0.228	0.502	0.502	0.003	0.003	0.008	0.008	2036	540	2.1	2.1
51	Waipā River SH3 Otorohanga	0.370	0.370	1.050	1.050	0.004	0.004	0.020	0.020	3289	540	1.2	1.6
43	Waipā River Pirongia Ngutunui Rd Br	0.565	0.565	1.270	1.270	0.008	0.008	0.023	0.023	4441	540	0.7	1.0
34	Waipā River Whatawhata Bridge	0.673	0.673	1.319	1.319	0.009	0.009	0.026	0.026	3657	540	0.6	1.0

<u>26</u>	Ohote-Stm Whatawhata/Horotiu Rd	0.495	0.495	1.370	1.370	0.023	0.023	0.052	0.05	2142	540	0.6	1.0
<u>36</u>	Kaniwhaniwha-Stm Wright Rd	0.350	0.350	0.890	0.890	0.007	0.007	0.022	0.022	1917	540	0.9	1.0
<u>38</u>	Mangapiko-Bowman Rd-Stm	1.369	1.0	2.490	1.5	0.022	0.022	0.076	0.03	7074	540	0.6	1.0
<u>39</u>	Mangaohoi-Stm South Branch Maru Rd	0.230	0.230	0.390	0.390	0.003	0.003	0.008	0.008	943	540	1.6	1.6
<u>37</u>	Mangauika-Stm Te Awamutu Borough W/S Intake	0.210	0.210	0.280	0.280	0.002	0.002	0.003	0.003	1008	540	3.3	3.3

Catchment number	Site	Attributes											
		Annual Median Nitrate (mg-NO ₃ -N/L)		Annual 95 th -percentile Nitrate (mg-NO ₃ -N/L)		Annual Median Ammonia ¹ (mg-NH ₄ -N/L)		Annual Maximum Ammonia ¹ (mg-NH ₄ -N/L)		95 th -percentile <i>E. coli</i> (<i>E. coli</i> /100mL)		Clarity (m) ²	
		short term	80-year	short-term	80-year	short term	80-year	short term	80-year	short term	80-year	short-term	80-year
<u>40</u>	Puniu River-Bartons Corner Rd-Br	0.650	0.650	1.280	1.280	0.007	0.007	0.029	0.029	2790	540	0.9	1.0
<u>47</u>	Mangatutu-Stm Walker Rd Br	0.380	0.380	0.880	0.880	0.003	0.003	0.012	0.012	738	540	1.5	1.6
<u>46</u>	Waitomo-Stm SH31 Otorohanga	0.520	0.520	0.830	0.830	0.008	0.008	0.025	0.025	1453	540	0.6	1.0
<u>53</u>	Mangapu River Otorohanga	0.860	0.860	1.360	1.360	0.015	0.015	0.057	0.05	4284	540	0.7	1.0
<u>52</u>	Waitomo-Stm Tumutumu Rd	0.630	0.630	0.800	0.800	0.004	0.004	0.013	0.013	2241	540	1.1	1.6
<u>63</u>	Mangaokewa-Stm Lawrence Street Br	0.530	0.530	0.980	0.980	0.004	0.004	0.013	0.013	6224	540	1.4	1.6

¹The annual median and annual maximum ammonia have been adjusted for pH

²Median black disc horizontal sighting range under baseflow conditions

³Attribute is not applicable to the sub-catchment

Table 3.11-1: Dune, Riverine, Volcanic and Peat Lakes Freshwater Management Units

Lake FMU	Attributes								
	Annual Median Chlorophyll a (mg/m ³)	Annual Maximum Chlorophyll a (mg/m ³)	Annual Median Ammonia ¹ (mg NH ₄ -N/L)	Annual Maximum Ammonia ¹ (mg NH ₄ -N/L)	Annual Median Total Nitrogen (mg/m ³)	Annual Median total Phosphorus (mg/m ³)	95 th percentile <i>E. coli</i> (<i>E. coli</i> /100mL)	80 th percentile cyanobacteria (biovolume mm ³ /L)	Clarity (m)
	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*
Dune	12	60	0.24	0.40	750	50	540	1.8 ⁺	1
Riverine	12	60	0.24	0.40	800	50	540	1.8 ⁺	1
Volcanic Zone	12	60	0.24	0.40	750	50	540	1.8 ⁺	1
Peat	12	60	0.24	0.40 ¹⁸⁹	750	50	540	1.8 ⁺	1

*unless a lake is already of better water quality, in which case the water quality is to not decline

+1.8mm³/L biovolume equivalent of potentially toxic cyanobacteria or 10mm³/L total biovolume of all cyanobacteria

¹ The annual median and annual maximum ammonia have been adjusted for pH

² Median black disc horizontal sighting range under baseflow conditions

Table 3.11-2: List of sSub-catchment Application Date s showing Priority 1, Priority 2, and Priority 3 sub-catchments/Te rārangi o ngā riu kōawaawa e whakaatu ana i te riu kōawaawa i te Taumata 1, i te Taumata 2, me te Taumata 3

For the purpose of this table, a property is considered to be within the sub-catchment where the greatest proportion of that property is located.

The “Application date” is the date Plan Change 1 is made operative, plus the number of years in the “year” column below:¹⁹⁰

<u>Year</u>	<u>Sub-catchment identifier</u>	<u>Sub-catchment number</u>
<u>1</u>	<u>75th Percentile Nitrogen loss Farms</u>	<u>N/A</u>
<u>2</u>	<u>Commercial Vegetable Production</u>	<u>N/A</u>
<u>2</u>	<u>Kirikiroa</u>	<u>23</u>
<u>2</u>	<u>Mangakotukutuku</u>	<u>30</u>
<u>2</u>	<u>Mangamingi</u>	<u>48</u>
<u>2</u>	<u>Mangapu</u>	<u>53</u>
<u>2</u>	<u>Mangarama</u>	<u>61</u>
<u>2</u>	<u>Mangarapa</u>	<u>55</u>
<u>2</u>	<u>Mangawara</u>	<u>17</u>
<u>2</u>	<u>Mangawhero</u>	<u>35</u>
<u>2</u>	<u>Waikato at Bridge St Br</u>	<u>27</u>
<u>2</u>	<u>Waikato at Horotiu Br</u>	<u>25</u>
<u>2</u>	<u>Waitawhiriwhiri</u>	<u>28</u>
<u>3</u>	<u>Little Waipa</u>	<u>44</u>
<u>3</u>	<u>Mangaharakeke</u>	<u>57</u>
<u>3</u>	<u>Matahuru</u>	<u>14</u>
<u>3</u>	<u>Opuatia</u>	<u>11</u>
<u>3</u>	<u>Pokaiwhenua</u>	<u>45</u>
<u>3</u>	<u>Waikare</u>	<u>13</u>
<u>3</u>	<u>Waikato at Waipapa</u>	<u>64</u>
<u>3</u>	<u>Waipa at SH23 Br Whatawhata</u>	<u>34</u>
<u>3</u>	<u>Waipapa</u>	<u>70</u>
<u>3</u>	<u>Whangamarino at Jefferies Rd Br</u>	<u>8</u>
<u>4</u>	<u>Mangaokewa</u>	<u>63</u>
<u>4</u>	<u>Mangatangi</u>	<u>2</u>
<u>4</u>	<u>Moakurua</u>	<u>42</u>
<u>4</u>	<u>Torepatutahi</u>	<u>72</u>
<u>4</u>	<u>Waerenga</u>	<u>12</u>
<u>4</u>	<u>Waikato at Rangiriri</u>	<u>15</u>
<u>4</u>	<u>Waioapu at Homestead</u>	<u>65</u>
<u>4</u>	<u>Waipa at Otorohanga</u>	<u>51</u>
<u>4</u>	<u>Waitomo at Tumutumu Rd</u>	<u>52</u>
<u>4</u>	<u>Whangape</u>	<u>16</u>
<u>5</u>	<u>Awaroa (Rotowaro) at Harris/Te Ohaki Br</u>	<u>18</u>
<u>5</u>	<u>Awaroa (Rotowaro) at Sansons Br</u>	<u>19</u>
<u>5</u>	<u>Waikato at Huntly-Tainui Br</u>	<u>20</u>
<u>5</u>	<u>Waikato at Narrows</u>	<u>33</u>
<u>5</u>	<u>Waikato at Ohaaki</u>	<u>73</u>
<u>5</u>	<u>Waikato at Port Waikato</u>	<u>6</u>
<u>5</u>	<u>Waioapu at Campbell</u>	<u>58</u>
<u>5</u>	<u>Waipa at Mangaokewa Rd</u>	<u>68</u>
<u>5</u>	<u>Whakapipi</u>	<u>3</u>
<u>5</u>	<u>Whangamarino at Island Block Rd</u>	<u>10</u>
<u>6</u>	<u>Kaniwhaniwha</u>	<u>36</u>
<u>6</u>	<u>Kawaunui</u>	<u>62</u>
<u>6</u>	<u>Komakorau</u>	<u>22</u>
<u>6</u>	<u>Mangakara</u>	<u>69</u>
<u>6</u>	<u>Mangakino</u>	<u>71</u>
<u>6</u>	<u>Mangaone</u>	<u>31</u>
<u>6</u>	<u>Mangapiko</u>	<u>38</u>

¹⁹⁰ WRC PC1-3420

6	<u>Otamakokore</u>	<u>59</u>
6	<u>Tahunaatara</u>	<u>54</u>
6	<u>Waikato at Tuakau Br</u>	<u>4</u>
6	<u>Waipa at Waingaro Rd Br</u>	<u>24</u>
6	<u>Waitomo at SH31 Otorohanga</u>	<u>46</u>
6	<u>Whakauru</u>	<u>49</u>
7	<u>Firewood</u>	<u>21</u>
7	<u>Karapiro</u>	<u>32</u>
7	<u>Mangaonua</u>	<u>29</u>
7	<u>Ohote</u>	<u>26</u>
7	<u>Puniu at Bartons Corner Rd Br</u>	<u>40</u>
7	<u>Puniu at Wharepapa</u>	<u>50</u>
7	<u>Waikato at Whakamaru</u>	<u>67</u>
7	<u>Waipa at Otewa</u>	<u>60</u>
7	<u>Waipa at Pirongia-Ngutunui Rd Br</u>	<u>43</u>
8	<u>Awaroa (Waiuku)</u>	<u>5</u>
8	<u>Mangaohoi</u>	<u>39</u>
8	<u>Mangatawhiri</u>	<u>1</u>
8	<u>Mangatutu</u>	<u>47</u>
8	<u>Mangauika</u>	<u>37</u>
8	<u>Ohaeroa</u>	<u>7</u>
8	<u>Pueto</u>	<u>74</u>
8	<u>Waikato at Karapiro</u>	<u>41</u>
8	<u>Waikato at Mercer Br</u>	<u>9</u>
8	<u>Waikato at Ohakuri</u>	<u>66</u>
8	<u>Whirinaki</u>	<u>56</u>

If more than fifty percent of a farm enterprise is in a particular sub-catchment, then the dates for compliance for that sub-catchment apply.

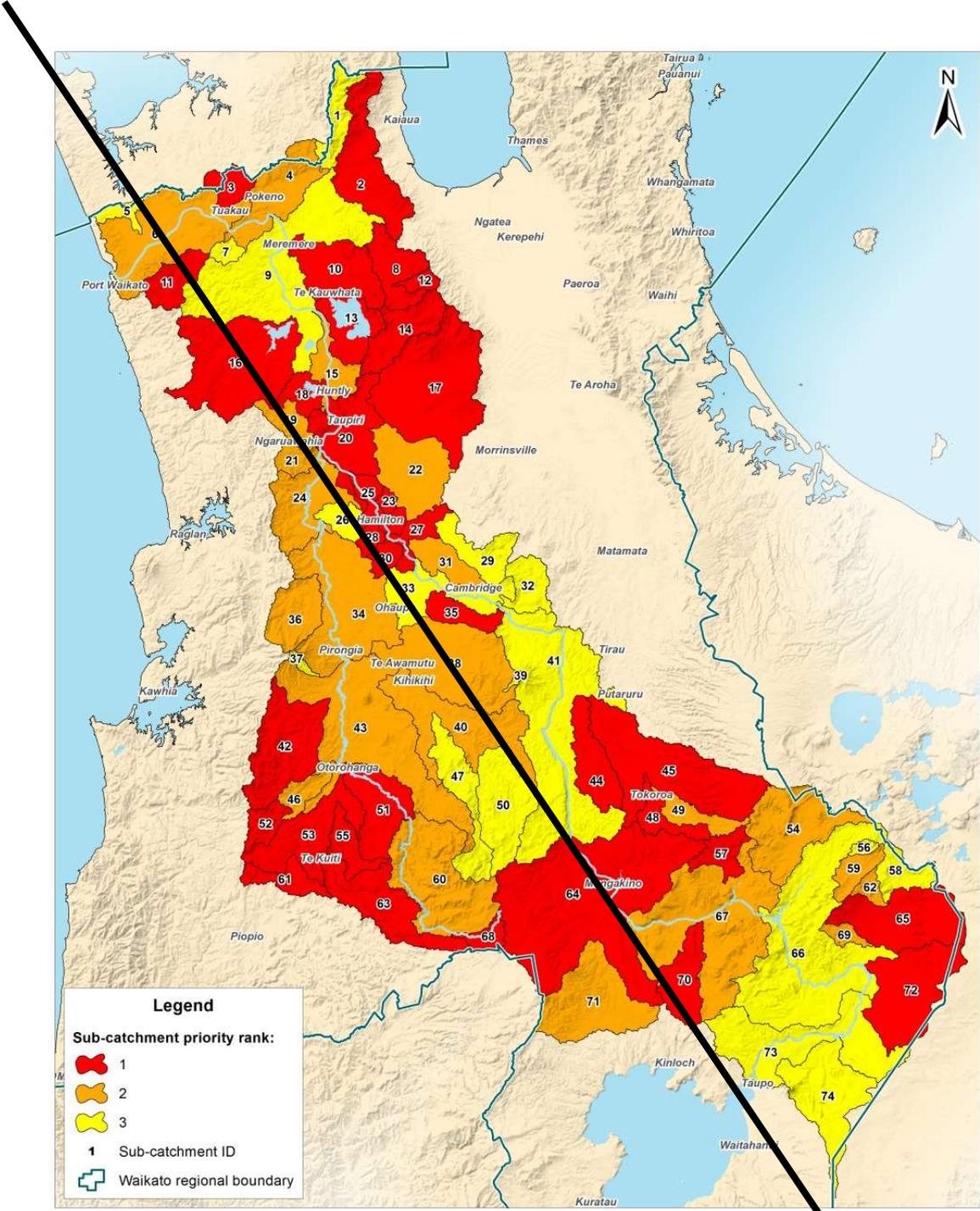
Sub-catchment identifier	Sub-catchment number	Priority
Mangatangi	2	1
Whakapipi	3	1
Whangamarino at Jefferies Rd Br	8	1
Whangamarino at Island Block Rd	10	1
Opuatia	11	1
Waerenga	12	1
Waikare	13	1
Matahuru	14	1
Whangape	16	1
Mangawara	17	1
Awaroa (Rotowaro) at Harris/Te Ohaki Br	18	1
Waikato at Huntly-Tainui Br	20	1
Kirikiri-roa	23	1
Waikato at Horotiu Br	25	1
Waikato at Bridge St Br	27	1
Waitawhiriwhiri	28	1
Mangakotukutuku	30	1
Mangawhero	35	1
Moakurua	42	1
Little Waipā	44	1
Pokaiwhenua	45	1
Mangamingi	48	1
Waipā at Otorohanga	51	1
Waitomo at Tumutumu Rd	52	1
Mangapu	53	1
Mangarapa	55	1
Mangaharakeke	57	1

Mangarama	61	1
Mangaokewa	63	1
Waikato at Waipāpa	64	1
Waiotapu at Homestead	65	1
Waipā at Mangaokewa Rd	68	1
Waipāpa	70	1
Torepatutahi	72	1
Waikato at Tuakau Br	4	2
Waikato at Port Waikato	6	2 ₁
Waikato at Rangiriri	15	2 ₁
Awaroa (Rotowaro) at Sansons Br	19	2 ₁
Firewood	21	2
Komakorau	22	2
Waipā at Waingaro Rd Br	24	2
Mangaone	31	2
Waipā at SH23 Br Whatawhata	34	2 ₁
Kaniwhaniwha	36	2
Mangapiko	38	2
Puniu at Bartons Corner Rd Br	40	2
Waipā at Pirongia Ngutunui Rd Br	43	2
Waitomo at SH31 Otorohanga	46	2
Whakauru	49	2
Tahunaatara	54	2
Otamakokore	59	2
Waipā at Otewa	60	2
Kawaunui	62	2
Waikato at Whakamaru	67	2
Mangakara	69	2
Mangakino	71	2
Mangatawhiri	1	3
Awaroa (Waiuku)	5	3
Ohaeroa	7	3
Waikato at Mercer Br	9	3
Ohote	26	3
Mangaonua	29	3
Karapiro	32	3
Waikato at Narrows	33	3 ₁
Mangauika	37	3
Mangaohoi	39	3
Waikato at Karapiro	41	3
Mangatutu	47	3
Puniu at Wharepapa	50	3
Whirinaki	56	3
Waiotapu at Campbell	58	3 ₁
Waikato at Ohakuri	66	3
Waikato at Ohaaki	73	3 ₁ ¹⁹¹
Pucto	74	3

Table 3.11 2: List of sub-catchments showing Priority 1, Priority 2, and Priority 3 sub-catchments

* part sub-catchment

¹⁹¹ DoC PC1-11067



Acknowledgements and Disclaimers
 1. © Waikato Regional Council 2013-2016. Healthy Rivers: Plan for Change / Wai Ora: He Rautaki Whakapaipai Data.
 2. Priority ranking by sub-catchment supplied by NIWA.
 3. Digital political boundaries data sourced from Statistics New Zealand.
 4. Hydrological data sourced from Land Information New Zealand. Crown Copyright Reserved.

Sub-catchments

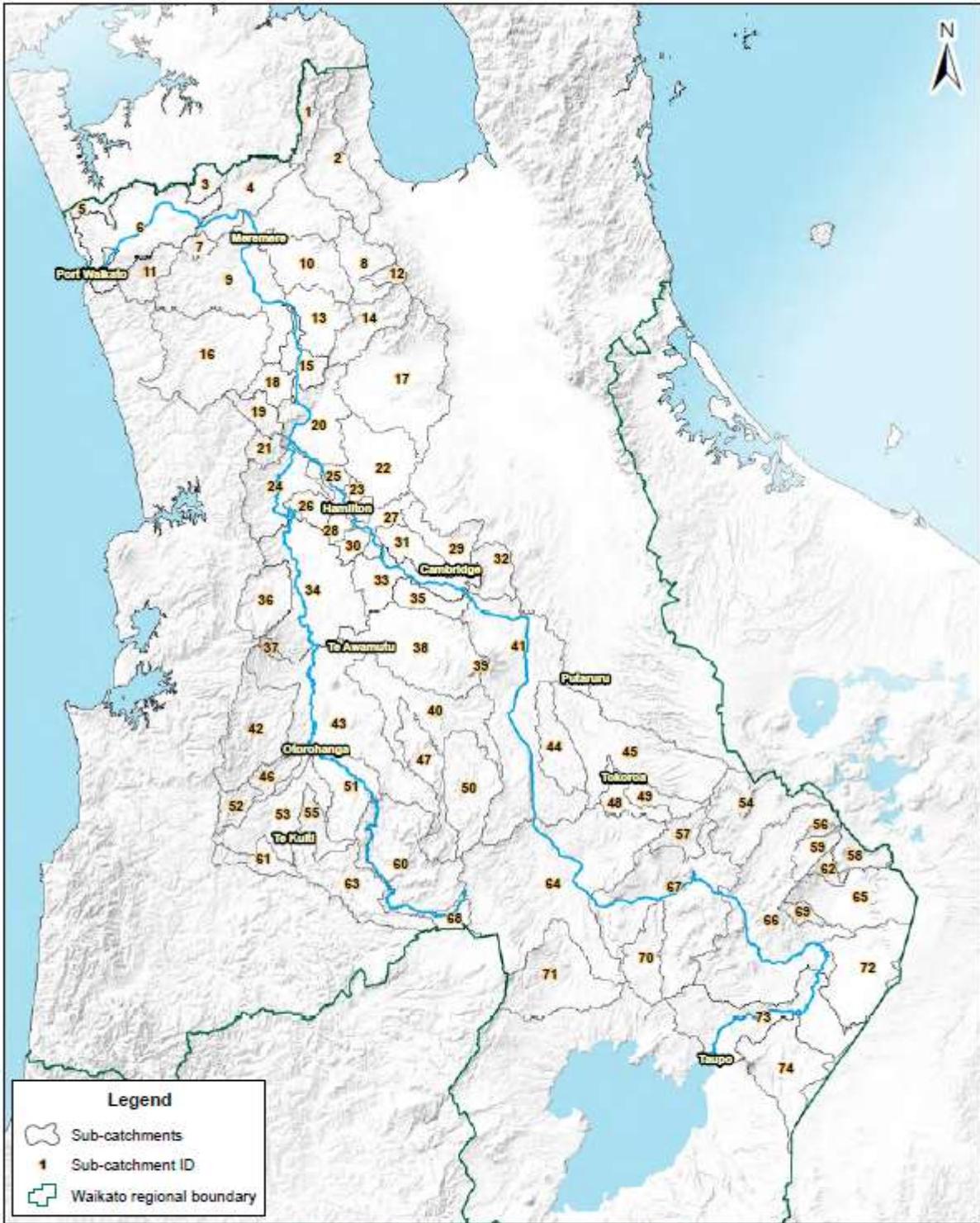


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 Job No.: 33102
 File: 33102 Sub-Catchments by Priority Rank.mxd



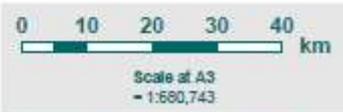
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Map 3.11-2: Map of the Waikato and Waipā River Catchments, showing sub-catchments



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Sub-catchments



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Map 3.11-2: Map of the Waikato and Waipā River Catchments, showing sub-catchments

PART B

~~5.1.5 Conditions for Permitted Activity Rule 5.1.4.11 and Standards and Terms for Controlled Activity Rules/Ngā āhuatanga o te Ture 5.1.4.11 mō ngā Mahi e Whakaaetia ana, me ngā Paerewa me ngā Herenga mō ngā Ture mō ngā Mahi ka āta Whakahaerehia~~

~~q) In the Waikato and Waipā Catchment the Waikato Regional Council shall be notified in writing at least 20 working days prior to commencing harvest operations in a forest. The written notice must include a harvest plan unless otherwise agreed with Waikato Regional Council.~~

~~Harvest Plan~~

~~For the purposes of 5.1.5 (q) a forest harvest plan means a documented plan, including a harvest plan map, which clearly identifies the area to be harvested and the method to be followed to ensure identified risks to water bodies arising from the harvesting operation are managed.~~

~~The harvest plan should include:~~

- ~~a. A harvest plan map to a scale of up to 1:10,000 showing:
 - ~~i. Title, date, north arrow and harvest area boundary.~~
 - ~~ii. The locations of all existing and proposed roads, tracks, landings, fire breaks and stream crossings.~~
 - ~~iii. The locations of all water bodies, streams and wetlands.~~
 - ~~iv. The location of any protected riparian vegetation including significant natural areas.~~
 - ~~v. The proposed harvest methodology including cable and ground based harvest areas and the proposed direction of extraction.~~
 - ~~vi. Proposed slash disposal areas.~~~~
- ~~b. Associated text specifying the controls on the harvest operations to manage the identified risks to water bodies in the block from the harvesting operations including:
 - ~~i. Measures to control sediment discharges to water.~~
 - ~~ii. Management of slash.~~
 - ~~iii. Operations restrictions around water bodies.~~
 - ~~iv. Areas of existing riparian vegetation to be protected.¹⁹²~~~~

¹⁹² There are no specific submissions seeking deletion of this section, as they pre-date the Forestry NES. A general submission seeking deletion of PC1 could be relied on, such as I Alexander PC1-10352.

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PART C

Additions to Glossary of Terms/Ngā Āpiti hanga ki te Rārangi Kupu

Definition – 75th percentile nitrogen leaching value

75th percentile nitrogen leaching value: The 75th percentile value (units of kg N/ha/year) of all of the Nitrogen Reference Point values for dairy farming properties and enterprises within each river (including properties within any lake Freshwater Management Unit within the relevant river Freshwater Management Unit)¹⁹³ Freshwater Management Unit¹⁹⁴ and which are determined by the Chief Executive Officer of the Waikato Regional Council and published on the Waikato Regional Council website and can be based on aggregated data supplied to the Waikato Regional Council and individual farm data¹⁹⁴ received by the Waikato Regional Council by nine (9) months from the date this Plan Change becomes operative.¹⁹⁵

Definition – Arable cropping

Arable cropping: means the following arable crops:

- i. grain cereal, legume, and pulse grain crops
 - ii. herbage seed crops
 - iii. oilseeds
 - iv. crops grown for seed multiplication for use in New Zealand or overseas
 - v. hybrid and open pollinated vegetable and flower seeds
- and includes maize grain, maize silage, cereal silage, and mangels.

Definition – Best management practice/s

Best management practice/s: For the purposes of Chapter 3.11, means maximum feasible mitigation to reduce the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens from land use activities¹⁹⁶.

Definition – Certified Farm Environment Planner

Certified Farm Environment Planner: is a person or entity¹⁹⁷ who has been approved certified by the Chief Executive Officer of the Waikato Regional Council to provide farm environment planning and auditing services. The person shall: and listed on the Waikato Regional Council website as a Certified Farm Environment Planner and has as a minimum the following qualifications and experience:

- a. five have a minimum of three¹⁹⁸ years' relevant experience in the management of pastoral, horticultural or arable farm systems; and
- b. be certified as a Nutrient Management Adviser under the Nutrient Management Adviser Certification Programme (or an equivalent certification programme approved by the Chief Executive Officer of Waikato Regional Council) completed advanced training or a tertiary qualification in sustainable nutrient management (nitrogen and phosphorus)¹⁹⁹; and
- c. have experience in soil conservation and sediment management; and
- d. have agreed to Waikato Regional Council's terms of agreement for operating as a Certified Farm Environment Planner.

Note: Certified Farm Environment Planners will be listed on the Waikato Regional Council's website.

¹⁹³ Federated Farmers V1PC1-790

¹⁹⁴ DairyNZ PC1-10253

¹⁹⁵ N and C Prendergast PC1-1779, R Hathaway PC1-5399

¹⁹⁶ Federated Farmers V1PC1-791, FANZ PC1-10659

¹⁹⁷ Forest and Bird PC1-8478

¹⁹⁸ Hill Country Farmers Group PC1-8072

¹⁹⁹ NZIPIM PC1-8445

Definition – Certified Farm Nutrient Advisor

Certified Farm Nutrient Advisor: is a person or entity who has been approved certified by the Chief Executive Officer of the Waikato Regional Council to provide nutrient management advice and produce a Nitrogen Reference Point in accordance with Schedule B. The person shall: ~~and listed on the Waikato Regional Council website as a certified farm nutrient advisor and has the following qualifications and experience as:~~

- a. ~~be certified as a Nutrient Management Adviser under the Nutrient Management Adviser Certification Programme (or an equivalent certification programme approved by the Chief Executive Officer of Waikato Regional Council); Has completed nutrient management training to at least intermediate level, and~~
- b. ~~Has experience in nutrient management planning~~
- c. ~~have agreed to Waikato Regional Council's terms of agreement for operating as a Certified Farm Nutrient Advisor.~~

Note: Certified Farm Nutrient Advisors will be listed on the Waikato Regional Council's website.²⁰⁰

Definition – Certified Industry Scheme/s

Certified Industry Scheme/s: is a scheme that has been certified by the Chief Executive Officer of Waikato Regional Council and listed on the Waikato Regional Council website as meeting the assessment criteria and requirements set out in Schedule 2 of Chapter 3.11.²⁰¹

Definition – Commercial vegetable production

Commercial vegetable production: means the following vegetables grown in New Zealand for commercial purposes:

- i. ~~asparagus, artichokes, Asian vegetables, beans, beetroot, boxthorn, broccoflower, broccoli, broccolini, Brussels sprouts, burdock, cabbage, capsicums, carrots, cauliflower, celeriac, celery, chilli peppers, chokos, courgettes, cucumbers, eggplant, Florence fennel, garland chrysanthemum, garlic, gherkins, herbs, Indian vegetables, kohlrabi, kumara, leeks, lettuces, marrows, melons, okra, onions, parsnips, peas, potatoes, puha, pumpkin, purslane, radishes, rakkyo, rhubarb, salad leaves, salsify, scallopini, scorzonera, shallots, silverbeet, spinach, spring onions, sprouted beans and seeds, squash, swedes, sweetcorn, taro, tomatoes, turnips, ulluco, watercress, witloof, yakon, yams, zucchinis, potatoes, tomatoes, asparagus, onions;~~ and
- ii. the hybrids of the vegetables listed in subparagraph i.

Definition – Cultivation

Cultivation: For the purposes of Chapter 3.11, means preparing land for growing pasture or a crop and the planting, tending and harvesting of that pasture or crop, but excludes:

- a. direct drilling of seed.
- b. no-tillage practices.
- c. ~~recontouring land.~~²⁰²
- d. forestry.

Dairy Cattle: means dairy cows that are or have been used for milk production, whether they are being grazed on a milking platform or not.²⁰³

Definition – Dairy Farming

Dairy Farming: means farming of dairy cattle cows on a milking platform for milk production²⁰⁴.

Definition – Diffuse discharge/s

Diffuse discharge/s: For the purposes of Chapter 3.11, means the discharge of contaminants that results from land use activities including cropping and the grazing of livestock and includes non-point source discharges, but does not include the

²⁰⁰ A McGovern PC1-8292

²⁰¹ A McGovern PC1-8286, Oji Ltd PC1-6564

²⁰² Forest & Bird PC1-8678

²⁰³ Consequential change to the relief sought by P Hurley PC1-1088, Federated Farmers V1PC1-338.

²⁰⁴ Forest and Bird PC1-8292

irrigation onto land of collected farm animal effluent and discharges from consented industrial and municipal wastewater systems.²⁰⁵

Definition – Drain

Drain: For the purposes of Chapter 3.11, means an artificially created open²⁰⁶ channel designed to lower the water table and/or reduce surface flood risk but does not include any modified (e.g. straightened) natural watercourse.

Definition – Drystock Farming

Drystock Farming²⁰⁷: means pasture grazing beef cattle, dairy animals cattle grazed off a milking platform, other dairy animals, sheep, and deer for meat, wool, or velvet production.

Definition – Edge of field mitigation/s

Edge of field mitigation/s: mitigation actions or technologies to reduce loss of contaminants from farm land by intervening at edge of field either on or off farm, and includes constructed wetlands, sedimentation ponds and detention bunds.²⁰⁸

Definition – Enterprise/s

Enterprise/s: means one or more parcels of land held in single or multiple ownership to support the principle land use or land which the principle land use is reliant upon, and constitutes a single operating unit for the purposes of management. An enterprise is considered to be within a sub-catchment if more than 50% of that enterprise is within the sub-catchment.²⁰⁹

Definition – Escherichia coli (E. coli)

Escherichia coli (E. coli)²¹⁰: is a bacterium used as an indicator that faecal contamination of the water has almost certainly occurred, so pathogens may be present in the water (Pathogen: an organism capable of causing an illness in humans).

Definition – Farm Environment Plan/s

Farm Environment Plan/s: For the purposes of Chapter 3.11, means a plan developed in accordance with Schedule 1.

Definition – Farming activities

Farming activities: For the purposes of Chapter 3.11, the grazing of animals or the growing of produce, including grass, crops, commercial vegetable production and orchard produce but not does not include:

- a. planted production forest; or
- b. the growing of crops on land irrigated by consented municipal wastewater discharges; or
- c. production or growing of produce undertaken entirely within a building; or²¹¹
- d. production or growing of produce for consumption by the occupier of the property or their family.²¹²

Feedlot: An area of land on which livestock are contained, where there is no forage available for grazing, and feed is brought to the livestock within in the area of containment.²¹³

²⁰⁵ Fonterra PC1-10593

²⁰⁶ Fert NZ PC1-10668

²⁰⁷ adapted from NIWA 2016. https://www.niwa.co.nz/our-science/freshwater/tools/kaitiaki_tools/land-use/agriculture/dry-stock

²⁰⁸ Term no longer used

²⁰⁹ Brodie PC1-2889, Waitomo District Council PC1-10312, G Kilgour PC1-1884

²¹⁰ Ministry of Health *Drinking-water Standards for New Zealand 2005 (Revised 2008) definition pg 146*

²¹¹ Gourmet Mokai Ltd PC1-7250, Tuaropaki Trust PC1-3009

²¹² H Clarke PC1-8466

²¹³ Consequential to I D Kerr PC1-4720

Definition – Five-year rolling average

Five-year rolling average²¹⁴: means the average of modelled nitrogen leaching losses predicted by OVERSEER[®] from the most recent 5 years.

Definition – Forage crop

Winter²¹⁵ **Forage crop**: means crops, annual or biennial, but excluding pasture species,²¹⁶ which are grown to be utilised by grazing or harvesting as a whole crop between 1 May and 30 September of each year.²¹⁷

Definition – Good Management Practice/s

Good Management Farming²¹⁸ **Practice/s**: For the purposes of Chapter 3.11, means ~~industry agreed and approved~~²¹⁹ practices and actions undertaken on a property or enterprise that manage,²²⁰ reduce or minimise the risk of contaminants entering a water body and are published on the Waikato Regional Council website.²²¹

Definition – Livestock crossing structure

Livestock crossing structure: means a lawfully established structure ~~installed to allow~~ that enables²²² livestock to cross a water body such that the livestock do not enter or have access to the bed of the water body²²³.

Low intensity horticulture means the production of apples, avocados, babacos, berry crops, casanas, cherimoyas, citrus, feijoas, figs, guavas, kiwifruit, kiwiberries, loquats, passionfruit, pears, persimmons, quinces, sapotes, summerfruit (including apricots, cherries, nectarines, peaches, and plums), and tamarillos, tree leaf crops (including tea); and any hybrids of these crops.²²⁴

Definition – Mahinga kai

Mahinga kai: the customary and contemporary gathering and use of naturally occurring and cultivated foods (also known as Hauanga kai).

Definition – Microbial pathogen/s

Microbial pathogen/s²²⁵: A microorganism capable of inducing illness in humans.

Definition – Milking platform

Milking platform: means that area of land devoted to feeding dairy cattle cows on a daily basis for the purpose of milk production and includes land used for the growing of feed for the cows within the same property during the milking season²²⁶.

²¹⁴ Adapted from Freeman, M.; (ed). (2016). *Using Overseer – Establishing national guidance for the appropriate and consistent use of Overseer by regional councils in setting and managing water quality limits* Consultation Draft Overseer Guidance Project, Overseer Management Services Ltd. Wellington, New Zealand

²¹⁵ New Zealand Grain and Seed Trade Association PC1-1680

²¹⁶ Genetic Technologies Ltd PC1-3341, A McGovern PC1-8295

²¹⁷ New Zealand Grain and Seed Trade Association PC1-1680

²¹⁸ Ballance PC1-6862, FANZ PC1-9712

²¹⁹ Oji PC1-8937

²²⁰ Federated Farmers V1PC1-800

²²¹ Oji PC1-8937

²²² WRC PC1-3672

²²³ Fish and Game PC1-11017

²²⁴ HortNZ V1PC1-1692

²²⁵ Adapted from Ministry of Health. 2008. *Drinking-water Standards for New Zealand 2005 (Revised 2008)*. Wellington

²²⁶ Pamu PC1-5938

Definition – Nitrogen Reference Point

Nitrogen Reference Point: The nitrogen discharge benchmark established for a property in accordance with Schedule B,²²⁷ The nitrogen loss number (units of kg N/ha/year) that is derived from an OVERSEER[®] use protocol compliant OVERSEER[®] file that describes the property or farm enterprise and farm practices in an agreed year or years developed by a Certified Farm Nutrient Advisor, using the current version of the OVERSEER[®] model (or another model approved by the Council) for the property or enterprise at the "reference" point in time.

Definition – Offset/s

Offset/s: For the purposes of Chapter 3.11 means for a specific contaminant/s an action that reduces residual adverse effects of that contaminant on water quality.

Definition – Point source discharge/s

Point source discharge: For the purposes of Chapter 3.11, means discharges from a stationary or fixed facility, including the irrigation onto land from consented industrial and municipal wastewater systems.

Point source discharge: For the purposes of Chapter 3.11, the discharge of contaminants at a discrete location, directly caused by the action of a person. It includes discharges from stationary and mobile facilities, the irrigation onto land of collected farm animal effluent, and discharges from consented industrial and municipal wastewater systems.²²⁸

Property: For the purposes of Chapter 3.11, means, to the extent that the land is within the Waikato and Waipā River catchments shown in Map 3.11-1, one or more allotments contained in single Computer Freehold Register (certificate of title), and also includes all adjacent land that is in common ownership but contained in separate certificates of title, including certificates of title separated only by a road, river or utility corridor, and is a single operating unit for the purpose of management.²²⁹

Regionally significant industry: means an economic activity based on the use of natural and physical resources in the region, which is demonstrated to have benefits that are significant at a regional or national scale. These may include social, economic or cultural benefits.²³⁰

Regionally significant infrastructure: includes:

- a. pipelines for the distribution or transmission of natural or manufactured gas or petroleum;
- b. infrastructure required to permit telecommunication as defined in the Telecommunications Act 2001;
- c. radio apparatus as defined in section 2(1) of the Radio Communications Act 1989;
- d. the national electricity grid, as defined by the Electricity Industry Act 2010;
- e. a network (as defined in the Electricity Industry Act 2010);
- f. infrastructure for the generation and/ or conveyance of electricity that is fed into the national grid or a network (as defined in the Electricity Industry Act 2010);
- g. significant transport corridors as defined in Map 6.1 and 6.1A;
- h. lifeline utilities, as defined in the Civil Defence and Emergency Management Act 2002, and their associated essential infrastructure and services;
- i. municipal wastewater treatment plants, water supply treatment plants and bulk water supply, wastewater conveyance and storage systems, municipal supply dams (including Mangatangi and Mangatawhiri water supply dams) and ancillary infrastructure;
- j. flood and drainage infrastructure managed by Waikato Regional Council;
- k. Hamilton City bus terminal and Hamilton Railway Station terminus; and
- l. Hamilton International Airport.²³¹

²²⁷ Fonterra PC1-10580, Pamu PC1-5932

²²⁸ Fonterra PC1-10593

²²⁹ WRC PC1-3671

²³⁰ Trustees of Highfield Deer Park PC1-3978

²³¹ Trustees of Highfield Deer Park PC1-3978

Definition – Restoration

Restoration: is the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. It is an intentional activity that initiates or accelerates an ecological pathway, or trajectory through time, towards a reference state consistent with Objective 1.²³²

Sacrifice Paddock: means an area of land on which livestock are repeatedly but temporarily contained, typically during extended periods of wet weather, where the soil in the confinement area suffers such severe treading damage that pasture renovation is required.²³³

Definition – Setback

Setback: means the distance from the bed of a river or lake, or margin of a wetland.

Slope: The steepness of the land surface. Slope is measured in degrees and to an accuracy no less than that achieved by a hand held inclinometer or Abney level. For the purposes of Chapter 3.11, for cultivation and grazing, slope shall mean the average slope over any 20m distance (measured along the ground surface); and for stock exclusion requirements, shall mean the average slope, measured from the edge of the bed of a waterbody to a distance of 20m perpendicular to that waterbody, averaged for the paddock.²³⁴

Definition – Stock unit

Stock unit: means an animal that eats 6,000 megajoules of metabolisable energy per year, and for the stock listed, is determined by and is illustrated in²³⁵ the following stocking rate table²³⁶:

Stock class	Number of Stock Units per animal	Animal performance definition
Dairy bull	6.1	620kg Friesian breeding bull
Dairy cow	10.4	450kg F8J8 dairy cow producing 400kg MS
Dairy heifer 1-2 years age	5.1	F8J8 199 – 419kg Jul to Apr
Dairy heifer calf (weaned)	1.6	F8J8 110 – 199kg Dec to Jun
Beef bull	6	620kg Beef cross MA breeding bull
Beef cow	7.5	480kg MA Beef cross breeding cow calving at 96%
Bull 1-2 years age	6.8	Friesian bull 209kg to 535kg slaughter weight
Steer 1-2 years age	5.8	WF steer 203kg to 478kg slaughter weight
Heifer 1-2 years age	5.7	WF heifer 208kg to 420kg slaughter weight
Steer calf < 1 year (weaned)	2.7	WF steer 100kg to 203kg Dec to Jun
Bull calf < 1 year (weaned)	2.7	Fresian 100kg to 209kg bull Dec to Jun
Heifer calf < 1 year (weaned)	1.6	WF heifer 90kg to 208kg Dec to Jun
Ram	1	73kg Romney ram, 4.5kg wool
Adult ewe	1.01	63kg Romney MA ewe lambing at 126%, 4.5kg wool
Sheep 1-2 years of age	0.9	Romney hogget 46kg to 66kg, 4kg wool
Sheep <1 years of age (weaned)	0.5	Romney 26kg to 46kg from Dec to June, 2kg wool
Bucks & does < 1 year (weaned)	0.5	OVERSEER® default
Angora does	1.1	OVERSEER® default
Feral does	0.9	OVERSEER® default
Feral bucks & wethers	0.5	OVERSEER® default
Stag	2.4	Red stag 200kg, 4kg velvet
Breeding hind	2.5	Red hind 110kg, 86% fawning
Hind 1-2 years age	1.2	Red hind 53kg – 75kg
Hind fawn (weaned)	1	Red hind 37kg – 53kg over 4 months, annualised to 12 months

²³² Federated Farmers V1PC1-807

²³³ Consequential change to the relief sought by P Hurley PC1-1088, Federated Farmers V1PC1-338.

²³⁴ AK Martyn PC1-4160

²³⁵ WRC V1PC1-1535

²³⁶ Table adapted from Perrin Ag Consultants Ltd 2016. Bay of Plenty Regional Council: Methodology for creation of NDA reference files and stocking rate table; version 2. Table 1: Stocking rate table pg. 18.

Stag 1-2 years age	2.3	Red stag 55kg – 159kg over 12 months, 2kg velvet
Stag fawn (weaned)	1.1	Red stag 42kg – 55kg over 4 months, annualised to 12 months
Alpaca	0.8	OVERSEER® default
Llama	1.6	OVERSEER® default
Pony	6	OVERSEER® default
Pony brood mare w/foal	8	OVERSEER® default
Small hack	8	OVERSEER® default
Small hack broodmare w/foal	10	OVERSEER® default
Large hack	12	OVERSEER® default
Thoroughbred	12	OVERSEER® default
Large hack broodmare w/foal	14	OVERSEER® default
Milking ewe	0.9	70kg ewe producing 50kg MS
Milking goat	1.8	80kg nanny producing 140kg MS

Stocking rate: means the average of 12 monthly average stock unit counts on a property divided by the grazed hectares of the property, and is expressed as su/ha, and is based on a farm year of 1 July to 31 June in any year.²³⁷

Grazed hectares: means the area in hectares, of a property that:

- (a) is in pasture and used for stock grazing; and
- (b) is in crops that are entirely grazed in-situ; and
- (c) is used as sacrifice paddocks; and
- (d) includes, for a period of 10 years from the date the land is retired, any land previously used for grazing that has been retired from all farming or forestry activities.

Definition – Sub-catchment

Sub-catchment: For the purposes of Chapter 3.11, means an area of land within the Waikato or Waipā²³⁸ River catchments representing the contributing area draining to one of 6974²³⁹ locations in the stream and river network, and used as the basic spatial unit for analysis and modelling²⁴⁰.

Definition – Tangata whenua ancestral lands

Tangata whenua ancestral lands: means land that has been returned through settlement processes between the Crown and tangata whenua of the catchment²⁴¹, or is, as at the date of notification (22 October 2016), Māori freehold land under the jurisdiction of Te Ture Whenua Maori Act 1993.

Definition – Woody vegetation

Woody vegetation: means indigenous vegetation, planted production forest, and any other non-pastoral vegetation (excluding weed species).

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²³⁷ MD & AJ Sellars PC1-9170

²³⁸ Mercury Limited PC1-9685

²³⁹ Refer to Map 3.11-2.

²⁴⁰ Federated Farmers V1PC1-810

²⁴¹ Iwi of Hauraki V1PC1-455

PART D

Consequential amendments to Waikato Regional Plan/Ngā whakatikahanga ka hua ake mō roto i te Mahere ā-Rohe a Waikato

Formatting used:

- Note that for the following text the new wording underlined and deleted wording has ~~strikethrough~~
- Blue “filling” marks different chapters/sections of the WRP and is inserted for ease of reference only
- Italics are for information only and are not matters to be submitted on

<i>Operative Plan Provision</i>	<i>Proposed Change</i>
<i>Readers Guide</i>	
<i>Introduction</i>	<p><i>Add to end second para:</i></p> <p><u>Plan Change 1 - Waikato and Waipā River catchments (made operative on [date])</u></p>
<i>Abbreviations and Symbols</i>	<p><i>Add the following alphabetically:</i></p> <p><u>NPS FM National Policy Statement Freshwater Management</u></p> <p><u>FEP Farm Environment Plan</u></p> <p><u>Ha hectare</u></p> <p><u>FMU Freshwater Management Unit</u></p> <p><u>N Nitrogen</u></p> <p><u>P Phosphorus</u></p> <p><u><i>E.coli Escherichia coli</i></u></p>

<i>2. Matters of Significance to Maori</i>	
<i>2.1.1 General</i>	<p><i>Add a new section at the end of 2.1.1:</i></p> <p><u>Legislation passed in 2010 and 2012* introduced a new era of co-management for the Waikato and Waipā River catchments. Co-management provides ways for iwi to manage the rivers together with central and local government. Waikato and Waipā River iwi – Ngati Maniapoto, Raukawa, Ngati Tuwharetoa, Te Arawa River Iwi and Waikato-Tainui – and Waikato Regional Council have been partners in developing the <i>Healthy Rivers: Plan for Change/ Wai Ora: He Rautaki Whakapaipai</i> project. This project was set up to assist in achieving the <i>Vision and Strategy for the Waikato River/ Te Ture Whaimana o Te Awa o Waikato</i>. Te Ture Whaimana o Te Awa o Waikato this Vision and Strategy is the primary direction-setting document for the Waikato and Waipā Rivers and focuses on restoring and protecting the health and well-being of the rivers for current and future generations.</u></p>

	<p><u>Chapter 3.11 has arisen from the above co-management project together with the Government's National Policy Statement for Freshwater Management 2014, and specifically addresses the Waikato and Waipā River catchments.</u></p> <p><u>* Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010; Ngati Tuwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act 2010 and Nga Wai o Maniapoto (Waipā River) Act 2012.</u></p>
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3.1 Water Resources	
3.1 Background and Explanation	<p><i>Add to end of para 4:</i></p> <p><u>Chapter 3.11 sets out more stringent provisions within the Waipā and Waikato River catchments to address the trend of degrading water quality.</u></p>
	<p><i>Add new sentence as second para in section "Tangata Whenua":</i></p> <p><u>The Waikato and Waipā River catchments are co-managed by the Waikato and Waipā River iwi – Ngati Maniapoto, Raukawa, Ngati Tuwharetoa, Te Arawa River Iwi and Waikato-Tainui – and Waikato Regional Council. The <i>Vision and Strategy for the Waikato River/ Te Ture Whaimana o Te Awa o Waikato</i> is the primary direction-setting document for the Waikato and Waipā Rivers and focuses on restoring and protecting the health and well-being of the rivers for current and future generations. (Refer also to CH 3.11)</u></p>
	<p><i>Amend last sentence under "Issue and Objective":</i></p> <p>....the objectives are found in Chapter 3.2 – 3.93.11 of this Plan....</p>

3.2 Management of Water Resources	
3.2 Water Management Classes	<p><i>Add as a new last paragraph:</i></p> <p><u>Freshwater Management Units</u></p> <p><u>In Chapter 3.11, Fresh Water Management Units and associated water quality targets have been established for the Waikato and Waipā River catchments. Within the Waikato and Waipā River catchments, these targets are used in decision-making processes guided by the objectives in Chapter 3.11 and for future monitoring of changes in the state of water quality within the catchments. With regard to consent applications for diffuse discharges or point source discharges of nitrogen, phosphorus, sediment and microbial pathogens it is not intended, nor is it in the nature of water quality targets, that they be used directly as receiving water compliance limits/standards.</u></p>
3.2.4.1 Water Management Classes	<p><i>Amend 3.2.4.1(e):</i></p> <p>.... apply to a water body as well as policies in Section 3.11.3 for waterbodies in the Waikato and Waipā River catchments, when making decisions the same issue and are inconsistent particular regard....</p>

3.3.3 Water Takes - Policies	
Policy 1 (c)	<i>Amend Policy 1(c):</i>

(Establish Allocation and Minimum Flows for Surface Water)in accordance with the policies in Chapters 3.2 and 3.11 of this Plan.
Policy 4 (f) (Establish Sustainable Yields from Groundwater)	Amend Policy 4(f):in accordance with the policies in Chapters 3.2 and 3.11 of this Plan.
Standard 3.3.4.28 (How riparian planting and stock exclusion fencing shall apply)	Add a new advisory note: It Within the Waikato and Waipā River catchments, additional requirements for riparian planting and stock exclusion fencing are outlined in refer also to ²⁴² Chapter 3.11.

3.4.5 Implementation methods – The Use of Water	
Rule 3.4.5.6 Permitted Activity Rule - Use of Water for Crop and Pasture Irrigation	Add a new advisory note: <u>Subject to compliance with any specified requirements, reporting through a Farm Environment Plan is a valid means of to describing how irrigation water balances will be calculated and managed</u> ²⁴³ .
Rule 3.4.5.7 Controlled Activity Rule - Use of Water for Crop and Pasture Irrigation	Add a new advisory note: <u>Subject to compliance with any specified requirements, reporting through a Farm Environment Plan is a valid means of describing how irrigation water balances will be calculated and managed</u> ²⁴⁴ .

3.5 Discharges	
Background and Explanation	Insert new section at end of the Background and Explanation section: Discharges associated with Farming Land Use Chapter 3.11 addresses the use of land for farming in the Waikato and Waipā River catchments including associated diffuse discharges.
Objective 3.5.2	Amend Objective 3.5.2 by adding a new clause c) as follows (and consequential renumbering): c) <u>does not have adverse effects that are inconsistent with the objectives for the Waikato and Waipā River catchments in Section 3.11.2.</u>

²⁴² Waikato Regional Council PC1-3685

²⁴³ Waikato Regional Council PC1-3685

²⁴⁴ Waikato Regional Council PC1-3658

<i>Principal Reasons for adopting the Objective</i>	<i>Amend Principal Reasons for adopting the Objective:</i> ...outlined in Sections 3.1.2, and 5.2.5 of this Plan....
<i>3.5.3 Policy 2(a)</i> <i>Managing Discharges to Water with More than Minor Adverse Effects)</i>	<i>Amend 3.5.3 Policy 2(a):</i> ... with the policies in Sections 3.2.3 and 3.11.3 of this Plan....
<i>3.5.3 Policy 4 Discharges to Land: Advisory Note</i>	<i>Add a new advisory note:</i> <u>In the Waikato and Waipā River catchments, refer also to Chapter 3.11.</u>
<i>3.5.3 Policy 5(b)</i> <i>Ground Water</i>	<i>Amend 3.5.3 Policy 5(b):</i> ... with the policies in Sections 3.2.3 and 3.11.3 of this Plan ...
<i>Explanation and Principal Reasons for Adopting the Policies</i>	<i>Add at the end of Policy 2 para:</i> <u>The cross reference to Section 3.11.3 recognises the specific water quality objectives sought to be achieved for the Waikato and Waipā River catchments through Chapter 3.11.</u> <i>Add at the end of Policy 6 para.:</i> <u>Chapter 3.11 addresses how water quality aspects of Te Ture Whaimana o Te Awa o Waikato the Vision and Strategy will be given effect to in the Waikato and Waipā River catchments.</u>
<i>Rule 3.5.5.1</i> <i>Permitted Activity Rule - Discharge of Farm Animal Effluent onto Land</i>	<i>Amend opening of rule:</i> The <u>point source</u> discharge of contaminants onto land ...
<i>Advisory Notes to Rule 3.5.5.1 Permitted Activity Rule - Discharge of Farm Animal Effluent onto Land</i>	<i>Add new bullet point:</i> <u>Diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens associated with use of land for farming in the Waikato and Waipā River catchments are addressed in Chapter 3.11.</u>
<i>Rule 3.5.5.2</i> <i>Permitted Activity Rule - Discharge of Feed Pad and Stand-Off Pad</i>	<i>Amend opening of rule:</i> The <u>point source</u> discharge of feed pad ...

Effluent onto Land	
<p>Advisory Notes to Rule 3.5.5.2</p> <p>Permitted Activity Rule - Discharge of Feed Pad and Stand-Off Pad Effluent onto Land</p>	<p>Add new bullet point:</p> <p><u>Diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens associated with use of land for farming in the Waikato and Waipā River catchments are addressed in Chapter 3.11.</u></p>
<p>Rule 3.5.5.3</p> <p>Controlled Activity Rule - Existing Discharge(s) of Effluent from Pig Farms onto Land</p>	<p>Amend opening of rule:</p> <p>The <u>point source</u> discharge of contaminants ...</p>
<p>Advisory Notes to Rule 3.5.5.3</p> <p>Controlled Activity Rule - Existing Discharge(s) of Effluent from Pig Farms onto Land</p>	<p>Add new bullet point:</p> <p><u>Diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens associated with use of land for farming in the Waikato and Waipā River catchments are addressed in Chapter 3.11.</u></p>
<p>Rule 3.5.5.4</p> <p>Discretionary Activity Rule - Discharge of Effluent onto Land</p>	<p>Amend opening of rule:</p> <p>The <u>point source</u> discharge of farm ...</p>
<p>Advisory Notes to Rule 3.5.5.4</p> <p>Discretionary Activity Rule - Discharge of Effluent onto Land</p>	<p>Add new bullet point:</p> <p><u>Diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens associated with use of land for farming in the Waikato and Waipā River catchments are addressed in Chapter 3.11.</u></p>
<p>Rule 3.5.5.5</p> <p>Discretionary Activity Rule - Discharge of Treated Effluent to Water</p>	<p>Amend opening of rule:</p> <p>Except as provided for by Rule 3.5.4.6, the <u>point source</u> discharge of treated...</p>

<p>Advisory Notes to Rule 3.5.5.5 Discretionary Activity Rule - Discharge of Treated Effluent to Water</p>	<p>Add new bullet point: <u>Diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens associated with use of land for farming in the Waikato and Waipā River catchments are addressed in Chapter 3.11.</u></p>
<p>Rule 3.5.5.6 Prohibited Activity Rule - Discharge of Untreated Animal Effluent</p>	<p>Amend opening of rule: The <u>point source</u> discharge of untreated ...</p>
<p>Explanation and Principal reasons for adopting methods 3.5.5.1 to 3.5.5.6</p>	<p>Add a new sentence at the end of first para: <u>Additional policies and rules are provided in Chapter 3.11 to manage diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens associated with use of land for farming within the Waikato and Waipā River catchments.</u></p>
<p>Rule 3.5.10.2 Controlled Activity Rule - Take, Diversion and Discharge of Water Pumped from Existing Drainage and Flood Control Schemes</p>	<p>Add new clause (v) to Rule 3.5.10.2: (v) <u>In the case of the Waikato and Waipā River catchments, measures that recognise and provide for the objectives in Chapter 3.11.</u></p>

<p>3.6 Damming & Diverting</p>	
<p>Objective 3.6.2 (a)</p>	<p>Amend Objective 3.6.2: (a)....in Sections 3.1.2 and <u>3.11.2</u></p>
<p>Principal Reasons for Adopting the Objectives</p>	<p>Amend first sentence: ... in Sections 3.1.2 and <u>3.11.2</u> and for....</p>

<p>3.7 Wetlands</p>	
<p>Objective 3.7.2</p>	<p>Amend the wording: Refer to Objectives 3.1.2</p>

<i>Policies 3.7.3 Explanation and Principal Reasons</i>	<i>Add a sentence at end of Explanation and Principal Reasons: <u>For Whangamarino Wetland refer also to Section 3.11.3 Policy 15.</u></i>
<i>Rule 3.7.4.6 Advisory note Discretionary Activity Rule - Creation of New Drains and Deepening of Drain Invert Levels</i>	<i>Amend advisory note first bullet: ...Policy 1 of Section 3.7.3 <u>and for Whangamarino Wetland, Section 3.11.3 Policy 15.</u></i>
<i>Rule 3.7.4.7 Discretionary Activity Rule – Drainage of Wetlands</i>	<i>Amend advisory note first bullet: ...Policy 1 of Section 3.7.3 <u>and for Whangamarino Wetland, Section 3.11.3 Policy 15.</u></i>
<i>Explanation and Principal Reasons for Adopting Methods 3.7.4.1 to 3.7.4.7</i>	<i>Amend first para: ...to achieve Objective 3.1.2...Other methods in Chapters 3.4, 3.5, 3.6, <u>3.11</u>....</i>

<i>3.8 Drilling</i>	
<i>3.8.2 Objective</i>	<i>Amend Objective 3.8.2 (a): a) ... in sections <u>3.1.2 and 3.11.2</u></i>

<i>3.9 Non-Point Source Discharges</i>	
<i>New section proposed</i>	<i>Add a new para after the Background and Explanation section: <u>The Relationship between Chapter 3.9 and Chapter 3.11</u> <u>With regard to the Waikato and Waipā River catchments, the objectives, policies and rules in this chapter should be read in conjunction with the provisions of Chapter 3.11. Where there is any inconsistency between this Chapter and Chapter 3.11, the provisions of Chapter 3.11 prevail.</u></i>
<i>Objective 3.9.2</i>	<i>Amend Objective 3.9.2: ...Objectives <u>3.1.2 and 3.11.2</u></i>

<i>Explanation and Principal Reasons for Adopting the Policies</i>	<p>Amend last sentence of last para under Policy 2: <i>... Lake Taupo and Waikato/Waipā River catchments...as detailed in Sections 3.10 and 3.11 respectively.</i></p> <p><i>[Add a last sentence at end of para on Policy 3:</i></p> <p><i><u>In the Waikato and Waipā River catchments, Rule 3.11.5.3 applies.]</u></i></p>
<p>Rule 3.9.4.11</p> <p><i>Permitted Activity Rule - Fertiliser Application</i></p>	<p>Add opening words:</p> <p><i><u>Except as otherwise provided for, or restricted by an approved Farm Environment Plan, in accordance with the provisions and requirements of Chapter 3.11, (which applies in the Waikato and Waipā River catchments) the discharge of fertiliser...</u></i></p>
<i>Explanation and Principal Reasons for Adopting Methods</i>	<p>Add to end of first para:</p> <p><i><u>For the Waikato and Waipā River catchments – refer also to provisions in Chapter 3.11.</u></i></p> <p>Add to end of Method 3.9.4.7:</p> <p><i><u>Refer to Chapter 3.11 for stock exclusion rules that apply in the Waikato and Waipā River catchments.</u></i></p> <p>Add to middle of Method 3.9.4.10:</p> <p><i><u>Apart from within the Lake Taupo Catchment and Waikato and Waipā River catchments, Waikato Regional</u></i></p>

4.2 River and Lake bed structures	
4.2.2 Objective	<p>Amend Objective 4.2.2 (b):</p> <p><i>...Objectives 3.1.2 and 3.11.2.</i></p>
<i>Principal Reasons for Adopting the Objective</i>	<p>Amend the para relating Part b):</p> <p><i>...and Objectives 3.1.2 in the Water module.</i></p>
4.2.3 Policy 2 (Management of Structures)	<p>Amend 4.2.3 Policy 2 (b):</p> <p><i>...in Sections 3.2.3 and 3.11.3...</i></p>
<p>Rule 4.2.8.2</p> <p><i>Controlled Activity Rule - Bridges</i></p>	<p>Amend Rule 4.2.8.2 matter (vii):</p> <p><i>...Water Management Class in this Plan and in the case of the Waikato and Waipā River catchments, the relevant water quality objectives in Chapter 3.11.</i></p>
<p>Rule 4.2.8.3</p> <p><i>Restricted Discretionary Activity Rule - Bridges</i></p>	<p>Amend Rule 4.2.8.3 matter (xi):</p> <p><i>...Water Management Class in this Plan and in the case of the Waikato and Waipā River catchments, the relevant water quality objectives in Chapter 3.11.</i></p>
Rule 4.2.9.3	Amend Rule 4.2.9.3 matter (xii):

Controlled Activity Rule - Culverts for Catchment Areas Not Exceeding 500 Hectares	...Water Management Class in this Plan <u>and in the case of the Waikato and Waipā River catchments, the relevant water quality objectives in Chapter 3.11.</u>
Rule 4.2.10.1 Permitted Activity Rule - Discharge and Intake structures	Amend Rule 4.2.10.1 condition (n): ...Water Management Classes in Section 3.2.4 of this Plan <u>and in the case of the Waikato and Waipā River catchments, the relevant water quality objectives in Chapter 3.11.</u>
Rule 4.2.11.2 Restricted Discretionary Activity Rule - Fords	Amend Rule 4.2.11.2 matter xi): ...Water Management Classes in this Plan <u>and in the case of the Waikato and Waipā River catchments, the relevant water quality objectives in Chapter 3.11.</u>
Rule 4.2.16.1 Controlled Activity Rule - Channel Training Structures	Amend Rule 4.2.16.1 matter (xi): ...Water Management Classes <u>and in the case of the Waikato and Waipā River catchments, the relevant water quality objectives in Chapter 3.11.</u>
Rule 4.2.20.3 Controlled Activity Rule - Removal or Demolition of Structures	Amend Rule 4.2.20.3 matter (x): ...Water Management Classes in Section 3.2.4 of this Plan <u>and in the case of the Waikato and Waipā River catchments, the relevant water quality objectives in Chapter 3.11.</u>

4.3 River and Lake Bed Disturbances	
4.3.1 Issue 4	Amend 4.3.1 Issue 4 (c): ...inconsistent with Chapters 3.1 <u>and 3.11</u>
4.3.2 Objective	Amend Objective 4.3.2 (b): ...with objectives in Chapters 3.1 <u>and 3.11</u> Amend Objective 4.3.2 (l): ...with objectives in Chapters 3.1 <u>and 3.11</u>

<i>Principal Reasons for Adopting the Objective</i>	<p><i>Amend para relating to Part b):</i></p> <p>... objectives in Chapter 3.1 of this Plan</p> <p><i>Amend para relating to Part l):</i></p> <p>... in Chapter 3.1</p>
<i>4.3.3. Policy 1 (Bed and Bank Alterations and Extraction of Sand, Gravel and Other Bed Material)</i>	<p><i>Amend 4.3.3. Policy 1 (b):</i></p> <p>...in Section 3.2.3 <u>and the objectives in Section 3.11.2, or...</u></p>
<i>4.3.3 Policy 3 (Clearance of Vegetation)</i>	<p><i>Amend 4.3.3 Policy 3 (a):</i></p> <p>...in Chapters <u>3.2 and 3.11</u></p>
<i>Explanation and Principal Reasons for Adopting the Policies</i>	<p><i>Add to the end of the paragraph relating to Policy 4:</i></p> <p><u>For the Waikato and Waipā River catchments, regulatory provisions are set out in Chapter 3.11.</u></p>
<i>Method 4.3.5.3 Livestock access</i>	<p><i>Add a new first sentence:</i></p> <p><u>The Waikato and Waipā River catchments are excluded from this method and are addressed in Chapter 3.11.</u></p>
<i>Rule 4.3.5.4 Permitted Activity Rule - Livestock on the Beds and Banks of Priority One Water Bodies</i>	<p><i>Amend opening words of Rule 4.3.5.4:</i></p> <p>...any water body <u>within the Waikato and Waipā River catchments or any water body mapped in the</u></p>
<i>Rule 4.3.5.4 Advisory Note</i>	<p><i>Add a new first bullet point:</i></p> <ul style="list-style-type: none"> ● <u>Controls on livestock in the Waikato and Waipā River catchments are set out in Chapter 3.11.</u>
<i>Rule 4.3.5.5 Discretionary Activity Rule - Livestock on the Beds and Banks of Priority One water Bodies</i>	<p><i>Amend opening words to rule 4.3.5.5:</i></p> <p>... Livestock Exclusion Area <u>where that Livestock Exclusion Area is outside the Waikato and Waipā River catchments:</u></p>
<i>Rule 4.3.5.5 Advisory Note</i>	<p><i>Add a new first bullet point:</i></p> <ul style="list-style-type: none"> ● <u>Controls on livestock access to water bodies in the Waikato and Waipā River catchments are set out in Chapter 3.11.</u>

4.3.5.6 <i>Non-Complying Activity - Livestock on the Beds and Banks of Rivers and Lakes</i>	<i>Amend opening words to Rule 4.3.5.6:</i> Except as provided for in Rules 4.3.5.4 and 4.3.5.5 <u>or within the Waikato and Waipā River catchments, the rules set out in Chapter 3.11, ...</u>
<i>Rule 4.3.5.6 Advisory Note</i>	<i>Add a new first bullet point:</i> • <u>Controls on livestock in the Waikato and Waipā River catchments are set out in Chapter 3.11.</u>
<i>Explanation and Principal Reasons for Adopting Methods</i>	<i>Add a new first sentence:</i> <u>The access of stock to waterbodies in the Waikato and Waipā River catchments are addressed in Chapter 3.11.</u>
<i>Rule 4.3.6.2</i> <i>Controlled Activity Rule - Extraction of Bed Material and Disturbance of River and Lake Beds associated with Lawfully Established Structures</i>	<i>Amend 4.3.6.2 matter xiii):</i> ... Water Management Classes in this Plan and in the case of the Waikato and Waipā River catchments, <u>the water quality objectives in Chapter 3.11.</u>

5.1 Accelerated Erosion	
<i>Background and Explanation</i>	<i>Add a new paragraph after the paragraph entitled Background and Explanation:</i> <u>Relationship between Chapter 5.1 and Chapter 3.11.</u> <u>Within the Waikato and Waipā River catchments, the diffuse discharge of sediment to water as a result of the use of land for farming is regulated by Chapter 3.11. Those requirements are separate to and distinct from the matters regulated in Chapter 5.1. The requirements of Chapter 5.1 and 3.11 must, therefore, be read together.</u>
<i>5.1.2 Objective</i>	<i>Amend 5.1.2(b):</i> ...Objectives <u>3.1.2 and 3.11.2</u>
<i>Principal Reasons for Adopting the Objective</i>	<i>Amend 4th para:</i> Objective 3.1.2 establishesin Chapter 3.2 of this Plan.
<i>5.1.4.11</i>	<i>Add new advisory note:</i>

<p><i>Permitted Activity Rule - Soil Disturbance, Roading and Tracking and Vegetation Clearance</i></p>	<p><u>With regard to the clearance of vegetation or planted production forest in the Waikato and Waipā River catchments, note that subsequent land use may be regulated by Rule 3.11.5.7.</u></p>
<p>5.1.4.12</p> <p><i>Permitted Activity Rule - Soil Cultivation Adjacent to water Bodies</i></p>	<p><i>Amend opening statement:</i></p> <p>Except as controlled by rules 7.2.6.1 and 7.2.6.2, <u>or in the Waikato and Waipā River catchments, as required by or by an approved Farm Environment Plan developed under the provisions of Chapter 3.11,</u> soil cultivation not less than...</p>
<p>5.1.4.13</p> <p><i>Discretionary Activity Rule - Soil Disturbance, Roading and Tracking and Vegetation Clearance</i></p>	<p><i>Add to the beginning of Clause 2:</i></p> <p><u>Except as allowed by an approved Farm Environment Plan developed under the provisions of Chapter 3.11</u> §soil cultivation...</p> <p><i>Add new advisory note:</i></p> <p><u>With regard to the clearance of vegetation or planted production forest in the Waikato and Waipā River catchments, note that subsequent land use may be regulated by Rule 3.11.5.7.</u></p>
<p>5.1.4.14</p> <p><i>Controlled Activity Rule - Soil Disturbance, Roading and Tracking and Vegetation Clearance, Riparian Vegetation Clearance in High Risk Erosion Areas</i></p>	<p><i>Add an advisory note:</i></p> <p><u>With regard to the clearance of vegetation or planted production forest in the Waikato and Waipā River catchments, note that subsequent land use may be regulated by Rule 3.11.5.7.</u></p>
<p>5.1.4.15</p> <p><i>Discretionary Activity Rule - Soil Disturbance, Roading and Tracking and Vegetation Clearance, Riparian Vegetation Clearance in High Risk Erosion Areas</i></p>	<p><i>Add an advisory note:</i></p> <p><u>With regard to the clearance of vegetation or planted production forest in the Waikato and Waipā River catchments, note that subsequent land use may be regulated by Rule 3.11.5.7.</u></p>
<p><i>Explanation and Principal</i></p>	<p><i>Add to end of para that deals with Method 5.1.4.5:</i></p>

<i>Reasons for Adopting Methods</i>	<p><u>Within the Waikato and Waipā River catchments, there are policy and regulatory provisions that require the development of Farm Environment Plans for some land uses (refer Chapter 3.11).</u></p> <p>Add to end of para that deals with Method 5.1.4.9:</p> <p><u>A regulatory approach has been introduced for the Waikato and Waipā River catchments in Chapter 3.11.</u></p>
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<i>5.2 Discharges onto or into land</i>	
<i>Integration with Water and Air Management</i>	<p>Add to para 3:</p> <p>...discussed in Chapters 3.5 and 3.11.</p>
<i>5.2.2 Objective</i>	<p>Amend clause b):</p> <p>...in Section 3.1.2 or the objectives for the Waikato and Waipā River catchments in Section 3.11.2.</p>
<i>5.2.3 Policy 2 Other Discharges Onto or Into Land</i>	<p>Amend 5.2.3 Policy 2(b):</p> <p>...in Sections 5.1.3 and 3.11.3</p> <p>Amend 5.2.3 Policy 2(c):</p> <p>... in Section 3.2.3.3 <u>or in the Waikato and Waipā River catchments, the water quality objectives in Section 3.11.2</u></p>
<i>Explanation and Principal Reasons for adopting Methods 5.2.5.1 to 5.2.5.8</i>	<p>Add as a last sentence to the opening paragraph:</p> <p><u>For activities in the Waikato and Waipā River catchments, refer also to the objectives and policies in Chapter 3.11.</u></p>

<i>5.3 Contaminated Land</i>	
<i>Objective 5.3.2</i>	<p>Amend clause b):</p> <p>...in Sections 3.1.2 and 3.11.2</p>
<i>Principal Reasons for adopting the Objective</i>	<p>Amend 3rd para:</p> <p>....in Chapters 3.1, 3.11 and 6.1.</p>