

## ~~Notified version (October 2016)~~

# Officer's "Tracked Changes" Recommendations

**Red tracked changes** are insertions or deletions due to  
Variation 1

**Black tracked changes** are insertions or deletions  
recommended by the Council Officers

**Blue tracked changes** are insertions or deletions  
recommended by experts for the Director-General of  
Conservation – Hearing Blocks 1,2 &3

Numbers in square brackets identify the reference number  
given to the Director-General's submission

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# **Proposed Waikato Regional Plan Change 1 – Waikato and Waipa 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 Waipa 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 Waipa 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 Waipa 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 Waipa 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 Waipa 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 Waipa 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 Waipa 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 hōnora 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 hapori 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 tūāhuetanga 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 hāwhe, 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 hapori, 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 matahiāpo, e whakarite ana hoki i tētehi mahere tauroa e puta ai Te Ture Whaimana ki te ao mārāma.

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 ō 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 ō 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 Waipa 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 Waipa 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 ~~strike through~~ 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 ([22 October 2016](#)) 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

Insert the following Section as a new chapter after Chapter 3.10 and before Chapter 4 of the Waikato Regional Plan

# 3.11 Waikato and Waipa 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 Waipa 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 Regional](#)<sup>1</sup> 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<sup>^</sup> (FMU): The FMUs are:

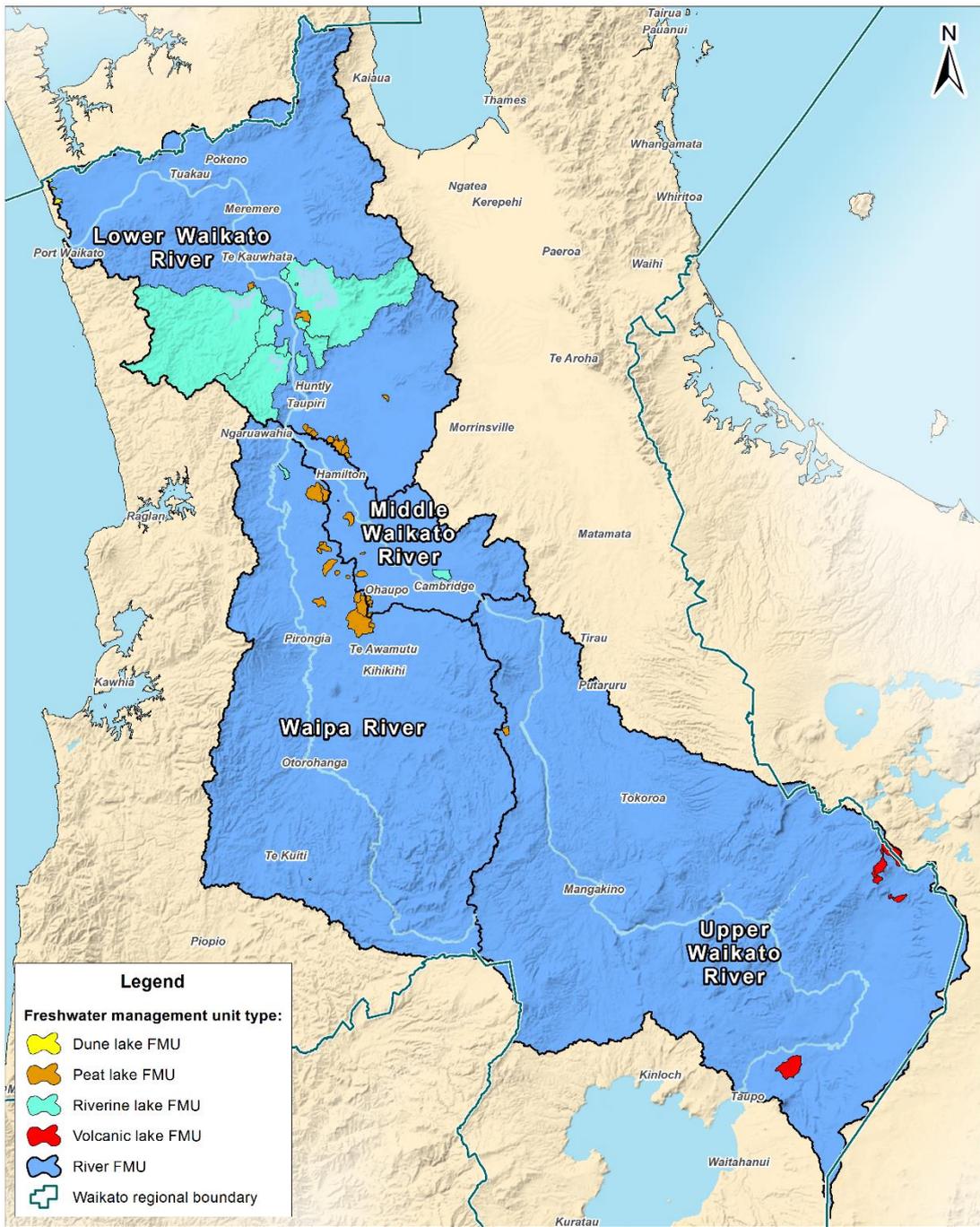
- Upper Waikato River
- Middle Waikato River
- Lower Waikato River
- Waipa River
- Peat Lakes
- Riverine Lakes
- Dune Lakes
- Volcanic Lakes
- [Whangamarino Wetland \[V1PC1-1139\]](#)

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

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

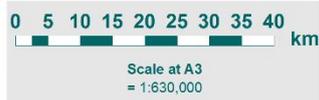
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<sup>1</sup> Waikato Regional Council PC1-2976



**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.

## Freshwater management units



Created by: A Jeffries  
 Date: 21/09/2016  
 Version: 1  
 Job No.: 33102  
 File: 33102 FMUs Lake and FMUs River.mxd



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

Updated map showing corrected boundaries to be inserted

[Scale of this map to be revised to provide greater certainty to plan users and decision makers on FMU boundaries \[PC1-10504\]](#)

[Also revise map and key to include Whangamarino Wetland FMU extent boundary \[PC1-10504\] \[V1PC1-1139\]](#)

## Background and explanation

### Co-management of the Waikato and Waipa Rivers

There are three River Acts that establish co-governance arrangements for the Waikato and Waipa 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 (Waipa River) Act 2012.

The iwi partners in the development of Chapter 3.11 are Maniapoto, Raukawa, Ngāti Tūwharetoa, 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 Waipa Rivers. The Vision and Strategy 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.

The Vision and Strategy states that the Waikato and Waipa Rivers are degraded and require, amongst other things, restoration and protection. One objective<sup>2</sup> 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. 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 nitrogen, phosphorus, sediment and microbial pathogen 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<sup>^</sup> 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~~ [protecting and restoring the intrinsic values and uses of lakes, rivers, wetlands and estuaries in the catchment.](#) [\[Consequential amendment\]](#)

### 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 Waipa River 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 Variation 1. Consultation has led to a Variation to Proposed Plan Change 1.](#)

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<sup>2</sup> Te Ture Whaimana o te Awa o Waikato, Objective K

## **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<sup>^</sup> and set limits<sup>^</sup> or targets<sup>^</sup> (a target is a limit to be achieved within a specified timeframe). Regional councils must ensure over-allocation<sup>^</sup> 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 Waipa 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<sup>^</sup> has occurred. Water bodies in the Waikato and Waipa 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<sup>^</sup> 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<sup>^</sup> 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<sup>^</sup> and attribute states<sup>^</sup> that can be monitored over time. Freshwater objectives<sup>^</sup> and limits<sup>^</sup> or targets<sup>^</sup> set out what is required to achieve the attribute states<sup>^</sup>. Under the NPS FM, a limit<sup>^</sup> is the maximum amount of resource use available, which allows a freshwater objective<sup>^</sup> to be met.

The CSG identified resource use that affects the achievement of the freshwater objectives<sup>^</sup> and long-term desired water quality, and for achieving the Vision and Strategy. Chapter 3.11 sets out policies and methods that restrict what can be done on the land and discharged to land or water.

### **Full achievement of 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 Waipa 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<sup>^</sup> and limits<sup>^</sup> in subsequent regional plans to be developed.

Because of the extent of change required to meet the 80-year limits<sup>^</sup>, 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 practice, and identify additional mitigation actions to reduce diffuse discharges by specified dates, which can then be monitored
- 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 point 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 to certify agricultural industry schemes
- 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 the Vision and Strategy and the water quality objectives, and sub-catchment limits<sup>^</sup> and targets<sup>^</sup> that have been set. This will happen as the current consent terms expire.

~~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.~~

~~In the short term, land use change from tree cover to animal grazing, or any livestock grazing other the dairy or arable cropping to dairy, 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.~~

### **Reviewing progress toward achieving 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 the Vision and Strategy, with on-farm actions carried out and point source discharges reviewed as existing resource consents come up for renewal. The staged approach gives people and communities time to adapt, while being clear that further reductions will be required by subsequent regional plans.

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.

During the life of this Plan, Waikato Regional Council will track the progress of actions undertaken on the land towards achieving 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.

## 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 tūtohunga 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 koununga wai o roto i te awa o Waikato, kia pai ai tā te tangata kaukau ki roto, kia pai ai te kōhi 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 waiparapara 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 waiparapara, 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 waiparapara 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 mātai 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 tāpuitanga<sup>^</sup> e whakaū ana i te hāngai pū o ngā tūmahi me te whakahaeretanga o te whakamahinga whenua ki ngā āheinga ahupūngao koiroa 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 ētehi 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

[Kei roto i te Rārangī Whakawhiti Kōrero 1 o te RMA ngā here kia mātua whakawhiti kōrero me ētehi hunga, pērā i ngā rūrunga ā-iwi, i te wā e whakaritea ana te Whakataurāngitanga. Kua oti ngā whakawhitinga kōrero me ngā hunga e pāngia ana, tae atu ki ngā rūrunga 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 Whakataurāngitanga Tuatahi. Nā ngā whakawhitinga kōrero i hua ai Te Whakataurāngitanga i te Panonitanga Tuatahi o te Mahere e Marohitia nei.](#)

### Te Koununga 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<sup>^</sup> me te whakatakoto tāpuitanga<sup>^</sup>, whāinga<sup>^</sup> 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<sup>^</sup> 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-waiparapara, ā-tukumate ora poto anō hoki. I whakatau te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga, he nui rawa te tohanga<sup>^</sup> 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-waiparapara, 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 hiahitia 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<sup>^</sup> e hāngai ana me ngā āhuatanga<sup>^</sup> ka taea te aroturuki i roto i te wā. Mā ngā whāinga wai Māori<sup>^</sup> me ngā tāpuitanga<sup>^</sup>, ngā whāinga<sup>^</sup> rānei e whakatau ngā here e tutuki ai ngā āhuatanga<sup>^</sup>. Kei raro i te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori, ko te tāpuitanga<sup>^</sup> 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<sup>^</sup>, 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 whakaturanga 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 whakaturanga 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 tauira, 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<sup>^</sup> me ngā tāpuitanga<sup>^</sup> i roto i ngā mahere ā-rohe ka whai ake.

Nā te nui o te panonitanga me puta rawa e tutuki ai ngā tāpuitanga<sup>^</sup> 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

nāiane 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 whakatauiria 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 ahuhenua
- 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<sup>^</sup> o ngā riu kōawāwa me ngā whāinga<sup>^</sup> 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 waiparapara, 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 mārama 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 Waipa Rivers/Ngā Uara me ngā Whakamahinga o ngā Awa o Waikato me Waipā

The National Policy Statement – Freshwater Management Policy CA2 requires certain steps to be taken in the process of setting limits<sup>Δ</sup>. These include establishing the values<sup>Δ</sup> that are relevant in a FMU<sup>Δ</sup>, identifying the attributes<sup>Δ</sup> that correspond to those values<sup>Δ</sup>, and setting objectives based on desired attribute states<sup>Δ</sup>. This section describes values and uses for the Waikato and Waipa Rivers, to provide background to the objectives and limits<sup>Δ</sup> in later sections.

This section describes the values and uses for the Waikato and Waipā Rivers. The values and uses reflect the Vision and Strategy for the Waikato River. The values and uses set out below apply to all FMU's unless explicitly stated, and provide background to the freshwater objectives<sup>3</sup>, and the attributes and attribute states outlined in Table 3.11-1.

#### **Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato<sup>4</sup>**

*“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.”<sup>5</sup>*

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

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<sup>3</sup> Wairakei Pastoral Ltd PC1-11260, DoC PC1-1831

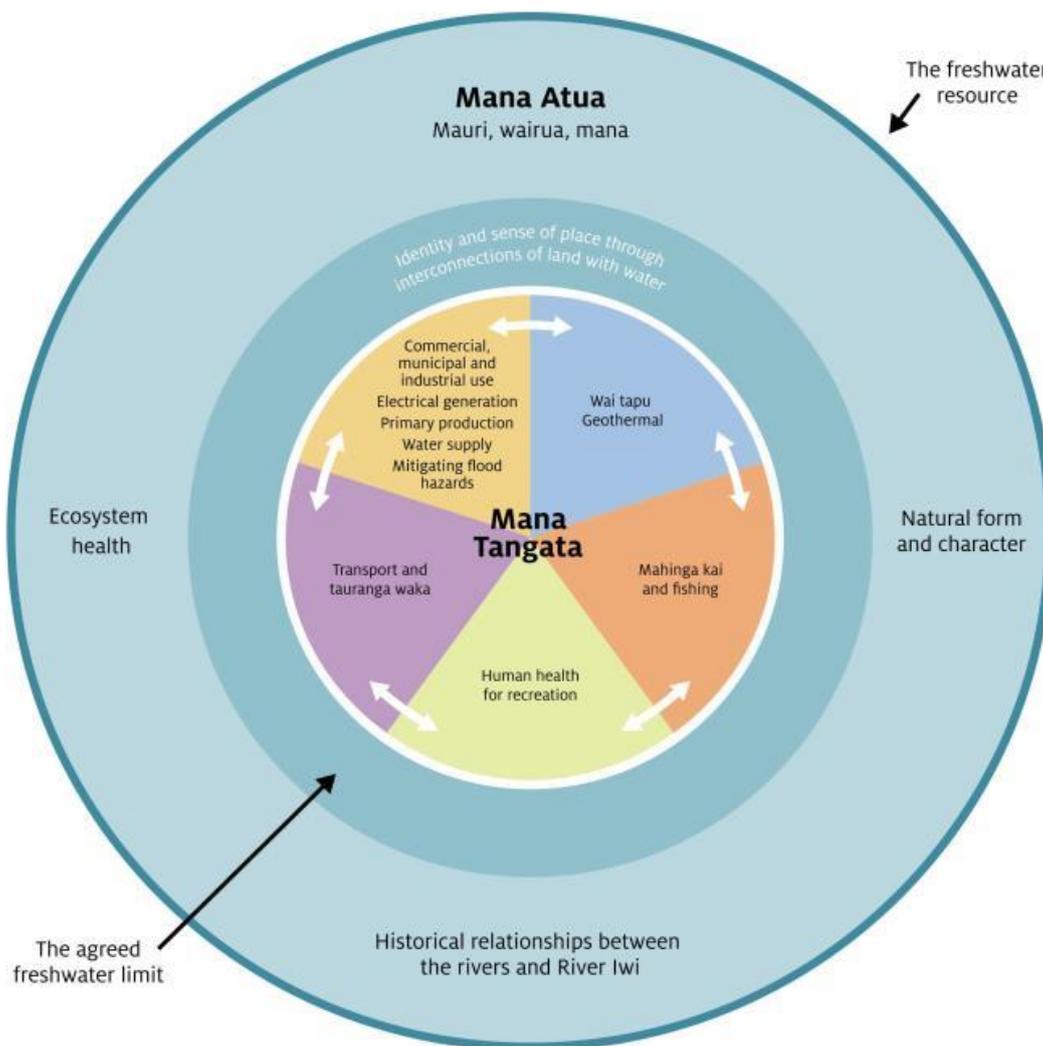
<sup>4</sup> *The Nga Wai o Maniapoto (Waipa River) Act 2012 extended Te Ture Whaimana o te Awa o Waikato to also cover the Waipa River and its catchment*

<sup>5</sup> *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.*

## 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 Wai<sup>6</sup>. 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.



Note: New diagram from Variation 1 to be inserted.

<sup>6</sup> 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, [streams, tributaries, lakes, wetlands and the coastal environment](#) contribute to a sense of community and sustaining community wellbeing.
- The rivers, [streams, tributaries, lakes, wetlands and the coastal environment](#) 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, [streams, tributaries, lakes, the coastal environment wetlands and springs](#), lies at the heart of the spiritual and physical wellbeing of iwi and their tribal identity and culture. The river, [streams, tributaries, lakes, the coastal environment, wetlands and springs are](#) is 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, streams, tributaries, lakes, the coastal environment 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, [streams, tributaries, lakes, wetlands and the coastal environment](#) 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. [\[Consequential amendment\]](#)

### 3.11.1.1 Mana Atua – Intrinsic values

#### ~~Intrinsic values – Ancestry and History<sup>7</sup>~~

~~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 Mua ~~neherā~~ / Ancestry and History

<p><del>Each River Iwi <a href="#">and other iwi</a> have <del>has</del> their own unique and intergenerational relationship with the rivers, <a href="#">tributaries, lakes, estuaries, wetlands and springs</a>.</del></p>	<ul style="list-style-type: none"> <li>▪ The Rivers, <a href="#">tributaries, lakes, estuaries, wetlands and springs</a> have always been seen as taonga (treasures) to all River Iwi <a href="#">and other iwi</a>.</li> <li>▪ The Rivers, <a href="#">tributaries, lakes, estuaries, wetlands and springs</a> have always given River Iwi <a href="#">and other iwi</a> a strong sense of identity and connection with the land and water.</li> <li>▪ Rivers, <a href="#">tributaries, lakes, estuaries, wetlands and springs</a> were used holistically; River Iwi <a href="#">and other iwi</a> understood the functional relationships with and between all parts of the rivers, <a href="#">tributaries, lakes, estuaries, wetlands and springs</a>, spiritually and physically <a href="#">as kaitiaki</a>.</li> <li>▪ <a href="#">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.</a></li> <li>▪ <a href="#">Iwi tupuna inhabited a rohe that teemed with life in the rivers, tributaries, lakes, estuaries, wetlands and springs. These resources were subject to access and use rights as an essential part of kaitiakitanga.</a></li> <li>▪ Iwi strive to maintain and restore these relationships despite the modification and destruction that has occurred through different types of development <a href="#">along affecting</a> the rivers, <a href="#">tributaries, lakes, estuaries, wetlands and springs</a>.<a href="#">[PC1-8136]</a></li> </ul>
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#### ~~Intrinsic values – Ecosystem health~~

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

<sup>7</sup> Watercare V1PC1-888

## Ecosystem health

<p>The Waikato and Waipa catchments support resilient freshwater ecosystems and healthy freshwater populations of indigenous plants and animals.</p>	<ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ 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.</li> <li>▪ <a href="#">Clean fresh water supports the natural ecological functioning of river, wetland, lake and estuarine ecosystems</a></li> <li>▪ Clean fresh water supports <a href="#">healthy populations and intact communities of native freshwater fish and their habitats, including spawning and migration habitats, and restores and sustains threatened and at-risk fish species into the future.</a></li> <li>▪ Wetlands and floodplains provide <a href="#">water purification</a>, refuge, feeding and breeding habitat for aquatic species, habitat for water fowl and other ecosystem services such as flood attenuation.</li> <li>▪ Fresh water contributes to unique habitats including peat lakes, shallow riverine lakes and karst formations which all support unique biodiversity.</li> <li>▪ Rivers and adjacent riparian margins <a href="#">are critical components of ecosystem health have value as ecological corridors.</a></li> <li>▪ <a href="#">Protection and recognition of Priority Biodiversity Areas is a key component of achieving ecosystem health [PC1-8139]</a></li> </ul>
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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

<p>Retain the integrity of the <a href="#">lakes, rivers, tributaries and wetlands</a> within the landscape and its aesthetic features and natural qualities for people to enjoy.</p>	<ul style="list-style-type: none"> <li>▪ <del>The</del> <a href="#">Lakes, rivers, tributaries, estuaries and wetlands</a><sup>8</sup> have amenity and naturalness values, including native vegetation, undeveloped stretches, and significant sites.</li> <li>▪ People are able to enjoy the natural environment; it contributes to their health and wellbeing.</li> <li>▪ The rivers are an ecological and cultural corridor.</li> <li>▪ The <a href="#">lakes, rivers, tributaries, estuaries and wetlands</a> as a whole living entity.</li> <li>▪ <a href="#">Natural form and character of fresh water bodies are the biological, visual and physical characteristics that are valued by the community including:</a> <ul style="list-style-type: none"> <li><a href="#">i. its biophysical, ecological, geological, geomorphological and morphological aspects;</a></li> <li><a href="#">ii. the natural movement of water and sediment including hydrological and fluvial processes;</a></li> <li><a href="#">iii. the location of the water body relative to its natural course;</a></li> <li><a href="#">iv. the relative dominance of indigenous flora and fauna;</a></li> <li><a href="#">v. the presence of culturally significant species;</a></li> <li><a href="#">vi. the colour of the water; and</a></li> <li><a href="#">vii. the clarity of the water.</a> [PC1-8152]</li> </ul> </li> </ul>
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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](#)

<sup>8</sup> DoC PC1-8136, 8189, 8152, 8532, 8533, 8535, 8540

<p>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></p>	<ul style="list-style-type: none"> <li>▪ <del>The</del> <u>Lakes, rivers, tributaries, estuaries and wetlands</u> are a place for sacred rituals, wairua, healing, spiritual nurturing and cleansing.</li> <li>▪ <del>The</del> <u>Lakes, rivers, tributaries, estuaries and wetlands</u> provide for cultural and heritage practices and cultural wellbeing, particularly at significant sites.</li> <li>▪ <del>The</del> <u>Lakes, rivers, tributaries, estuaries and wetlands</u> <u>have different states of wai tapu and wai kino that are adhered to and respected.</u> [PC1-8132]</li> </ul>
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~~Use values – Geothermal~~

**Ko ngā Ngāwhā / Geothermal**

Geothermal

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

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

Mahinga kai

<p>The ability to access the Waikato and Waipa <u>Rivers, lakes, and wetlands</u> 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"> <li>▪ <del>The</del> <u>Lakes, rivers, tributaries, estuaries and wetlands</u> provide for freshwater native species, native vegetation, and habitat for native animals.</li> <li>▪ <del>The</del> <u>Lakes, rivers, tributaries, estuaries and wetlands</u> provide for freshwater game and introduced kai species.</li> <li>▪ <del>The</del> <u>Lakes, rivers, tributaries, estuaries and wetlands</u> 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.</li> <li>▪ The rivers, <u>, tributaries, estuaries</u> should be safe to take food from, both fisheries and kai.</li> <li>▪ <del>The</del> <u>Lakes, rivers, , tributaries, estuaries and wetlands</u> support aquatic life, healthy biodiversity, ecosystem services, flora and fauna and biodiversity benefits for all.</li> <li>▪ The rivers <u>and tributaries</u> are a corridor.</li> <li>▪ <del>The</del> <u>Lakes, rivers, , tributaries, estuaries and wetlands</u> provide resources available for use which could be managed in a sustainable way.</li> <li>▪ <del>The rivers provide for recreation needs and for social wellbeing.</del><sup>9</sup>[PC1-8133]</li> </ul>
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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><u>The Lakes, wetlands, tributaries, estuaries and</u> 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"> <li>▪ <del>The</del> <u>Lakes, wetlands, tributaries, estuaries and</u> 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.</li> <li>▪ An important value for the <u>lakes, estuaries and</u> rivers <u>and tributaries</u> is cleanliness; the <u>lakes, estuaries and</u> rivers <u>and tributaries</u> should be safe for people to swim in.</li> </ul>
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<sup>9</sup> Federated Farmers V1PC1-106

	<ul style="list-style-type: none"> <li>The <u>lakes, estuaries and rivers and tributaries</u> provide resources available for use which could be managed in a sustainable way. [PC1-8135]</li> </ul>
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**Use values – ~~Transport and tauranga waka~~**

**He urungi / Navigation**

Transport and tauranga waka

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

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

Primary production

The rivers support regionally and nationally significant primary production in the catchment (agricultural, 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.	<ul style="list-style-type: none"> <li>The rivers support a wide variety of primary production in the catchment, including dairy, meat, wool, horticulture and forestry.</li> <li>Due to the economies of scale of these industries, other service sectors, such as agritech, aviation and manufacturing, are able to operate.</li> <li>These industries combined contribute significantly to regional and national GDP, exports, food production and employment.</li> <li>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 <u>and urban</u><sup>10</sup> Waikato.</li> </ul>
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**~~Water supply~~**

**Ko ngā hāpori wai Māori / Municipal and domestic water supply**

Water supply

The rivers provide for community water supply, municipal supply <u>and</u> drinkable water supply <u>and health</u> . <sup>11</sup>	<ul style="list-style-type: none"> <li>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.</li> </ul>
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**Use values – ~~Commercial, municipal and industrial use~~**

**Ko ngā āu putea / Economic or commercial development**

<sup>10</sup> Hamilton CC PC1-10067

<sup>11</sup> Federated Farmers V1PC1-117

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"> <li>▪ <del>The Lakes, rivers and wetlands</del> provide for economic wellbeing, financial and economic contribution, individual businesses and the community and the vibrancy of small towns. They are working <u>lakes</u>, rivers <u>and wetlands</u>; they create wealth.</li> <li>▪ Those industries are important to the monetary economy of Waikato region, enabling a positive brand to promote to overseas markets.</li> <li>▪ <del>The Lakes, rivers and wetlands</del> provide for domestic and international tourism. Promotion of a clean, green image attracts international and domestic visitors.</li> <li>▪ <del>The Lakes, rivers and wetlands</del> provide assimilative capacity for wastewater disposal, flood and stormwater, and ecosystem services through community schemes or on site disposal.</li> <li>▪ <a href="#">Wetlands and floodplains provide water purification [Consequential amendment]</a></li> </ul>
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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> <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"> <li>▪ 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.</li> <li>▪ 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.</li> <li>▪ Geothermal power stations located on multiple geothermal systems use fresh water for cooling, process water and drilling.</li> </ul>
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~~Use values – Mitigating flood hazards~~

Mitigating flood hazards

<p>Flood management systems protect land used and inhabited by people <u>and</u> livestock.<sup>12</sup></p>	<ul style="list-style-type: none"> <li>▪ River engineering, including stopbanks and diversions, protect land and infrastructure from damage by flooding.</li> <li>▪ <a href="#">Natural infrastructure that mitigate flood impacts, recognising that altered flood regimes, can impact on intrinsic values and uses. [Consequential amendment]</a></li> </ul>
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<sup>12</sup> Hamilton CC PC1-10167

### 3.11.2 Objectives/Ngā Whāinga

#### New Objective #1

Land, fresh water bodies, the coastal marine area and ecosystems are managed as integrated and connected resources to restore the health and wellbeing of the Waikato and Waipā River catchments; ki uta ki tai – mountains to the sea. [PC1-10521][VCPC1-1701]

#### New Objective #2

To restore and protect the health and wellbeing of fresh water bodies and the coastal marine area within the Waikato and Waipā River catchments, waterbodies are managed to:

- Safeguard the life supporting capacity of aquatic ecosystems; [PC1-10521]
- Recognise and provide for indigenous biodiversity including freshwater fish species; [PC1-10521]
- Recognise and provide for the significant values of all wetlands; and[PC1-10521] [VCPC1-997]
- Ensure that water quality in the catchments is improved. [V1PC1-997]

**~~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 latest<sup>13</sup>, a reduction in the discharges of nitrogen, phosphorus, sediment and microbial pathogens to land and water results in achievement of the restoration and protection of the Waikato and Waipā Rivers, such that of the 80-year water quality attribute targets states<sup>14</sup> in Table 3.11-1 are met<sup>15</sup>.

To restore and protect the Waikato and Waipā River catchments to ensure the 80 year water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 are achieved by 2096 [PC1-10535]

**~~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 Waipa communities and their economy benefit from the Long -term restoration and protection of water quality in the Waikato and Waipā<sup>16</sup> River catchments, resulting from the reduction of contaminant discharges, which will enables the people and communities to continue to provide for their social, economic and cultural wellbeing. [PC1-10537]

**~~Objective 3: 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 Māori<sup>17</sup>~~**

Actions put in place and implemented by 2026 to Reduce diffuse and point source<sup>18</sup> discharges of nitrogen, phosphorus, sediment and microbial pathogens, are sufficient to achieve the short-term water quality attribute states-limits/targets in Tables 3.11-1,<sup>19</sup> 3.11.1a, 3.11-3 and 3.11-4 by 2030. 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. [PC1-10537]

<sup>13</sup> Tangata Whenua – Waikato and Waipa River Iwi PC1-3245

<sup>14</sup> Fonterra PC1-10455

<sup>15</sup> Watercare PC1-8450; Beef and Lamb PC1-11154

<sup>16</sup> Mercury NZ Ltd PC1-9506

<sup>17</sup> Watercare PC1-8450

<sup>18</sup> DoC PC1-10540

<sup>19</sup> Southern Pastures Ltd Partnership PC1-11095

#### **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<sup>20</sup> targets<sup>21</sup> for the Waikato and Waipa 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.

OR

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

A staged approach to ~~reducing contaminant losses~~ change<sup>20</sup> 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<sup>21</sup> taking action to achieve the attribute<sup>22</sup> targets<sup>22</sup> for the Waikato and Waipa 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 in order<sup>23</sup> to meet Objective 1<sup>24</sup>. [PC1-10542]

#### **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.
- d. [Intrinsic values of waterbodies and ecosystems are recognised and provided for.](#) [PC1-10521] [VCPC1-997][PC1-10545]

#### **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<sup>24</sup> targets<sup>24</sup> in Table 3.11-1.~~

OR

#### **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<sup>24</sup> targets<sup>24</sup> in Table 3.11-1.~~

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<sup>20</sup> Rotorua Lakes DC PC1-2468

<sup>21</sup> Southern Pastures Ltd Partnership PC1-11096 and Ata Rangi PC1-6113

<sup>22</sup> Fonterra PC1-10451

<sup>23</sup> Southern Pastures Ltd Partnership PC1-11096 and Ata Rangi PC1-6113

<sup>24</sup> Rotorua Lakes DC PC1-2468

To achieve the restoration and protection of the Whangamarino Wetland, an integrated approach to the reduction of contaminant discharge in the catchment is required and shall be consistent with achieving the water quality attribute limits/targets in Tables 3-11.1, 3.11-1a and 3.11-4. [PC1-10545]

### **New Objective #3**

By 2026, policies and methods are implemented that safeguard the ecosystem health of all wetlands by specifically minimising and avoiding the impact of nitrogen, phosphorus and sediment on natural wetlands, and associated hydrological drivers of water quality decline, including a programme for benchmarking and setting numeric targets for wetland attributes. [PC1-10521, V1PC1-997]

## **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<sup>25</sup> for water quality consistent with the Vision and Strategy. Objective 1 sets aspirational 80-year water quality targets<sup>26</sup>, which result in improvements in water quality from the current state monitored in 2010-2014. The water quality attributes<sup>27</sup> 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.<sup>25</sup> **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 6**<sup>26</sup>

### **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<sup>28</sup> targets<sup>27</sup> may require a potentially significant departure from how businesses and communities currently function, and it is important to minimise social disruption during this transition.<sup>27</sup>

### **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 measureable 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.<sup>28</sup>

### **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.

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<sup>25</sup> Watercare PC1-8450; Beef and Lamb PC1-111541

<sup>26</sup> Oji Ltd PC1-6392

<sup>27</sup> Forest and Bird PC1-8220

<sup>28</sup> Watercare PC1-8450

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.

### 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 waiparapara me te tukumate ora potu**

~~Reduce Manage and require reductions in~~<sup>29</sup> ~~catchment-wide and~~<sup>30</sup> ~~sub-catchment-wide diffuse~~<sup>31</sup> ~~discharges of nitrogen, phosphorus, sediment and microbial pathogens, of contaminants~~ by:

- ~~a1. Requiring all farming activities to operate at Good Farming Practice, or better; and~~<sup>32</sup>
- ~~a2. Establishing, where possible, a Nitrogen Reference Point for all properties or enterprises; and~~<sup>33</sup>
  - ~~a. Enabling activities with a low level of contaminant discharge to water bodies provided those discharges do not increase~~<sup>34</sup>; and
  - ~~b. Requiring farming activities 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~~<sup>35</sup>; and
- ~~b1. Calculating the 75<sup>th</sup> percentile, 60<sup>th</sup> percentile and 50<sup>th</sup> percentile nitrogen leaching values and requiring farmers with a Nitrogen Reference Point greater than the 75<sup>th</sup> percentile in river and Whangamarino Wetland sub-catchments or 60<sup>th</sup> percentile in lake sub-catchments to reduce nitrogen loss to below the 75<sup>th</sup> relevant percentile and farmers with a Nitrogen Reference Point between the 50<sup>th</sup> and 75<sup>th</sup> percentile to demonstrate real and enduring reductions of nitrogen leaching, with resource consents specifying an amount of reduction or changes to practices required to take place; and~~<sup>36</sup>
- ~~b2. Where Good Farming Practices are not adopted, to specify controls in a resource consent that ensures contaminant losses will be reducing;~~<sup>37</sup>
- ~~b3. Except as provided for in Policies [1(a) and] 16, generally granting only those land use and discharge consent applications that demonstrate clear and enduring reductions in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens; and~~<sup>38</sup>
- ~~b4. Except as provided for in Policies [1(a) and] Policy 16, generally not granting land use Consent 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 will only be granted where the application demonstrates clear and enduring reductions in diffuse discharges of contaminants nitrogen, phosphorus, sediment and microbial pathogens; and~~<sup>39</sup>
- ~~c. Progressively excluding cattle, horses, deer and pigs from rivers, streams, drains, wetlands and lakes. [PC1-10639]~~

#### **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**

~~Reduce Manage and require reductions in~~<sup>40</sup> ~~catchment-wide and~~<sup>41</sup> ~~sub-catchment-wide~~<sup>42</sup> ~~diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens of contaminants~~ from farming activities on properties and enterprises, through Farm Environment Plans<sup>43</sup> that:

- ~~a1. Set out clear, specific and timeframed minimum standards for Good Farming Practice; and~~<sup>44</sup>
- ~~a. Take Taking a tailored, risk based approach to define mitigation actions on the land that will reduce diffuse discharges of contaminants of nitrogen, phosphorus, sediment and microbial pathogens, with the mitigation actions to be~~

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<sup>29</sup> DoC PC1-10643

<sup>30</sup> WRC V1PC1-1497

<sup>31</sup> Fert NZ PC1-9707, Federated Farmers V1PC1-162

<sup>32</sup> Dairy NZ PC1-10196

<sup>33</sup> Hort NZ PC1-10051, Hira Bhana and Co Ltd PC1-4020 (shifted from Pol 2 with modifications)

<sup>34</sup> Beef and Lamb PC1-12576

<sup>35</sup> Beef and Lamb PC1-12711 (shifted from Pol 2 with modifications)

<sup>36</sup> C and G Tierney PC1-7717, Sinclair Family Trust PC1-6180, Federated Farmers V1PC1-357

<sup>37</sup> Consequential to DairyNZ PC1-10196

<sup>38</sup> DoC PC1-71759

<sup>39</sup> DoC PC1-71759

<sup>40</sup> DoC PC1-10643

<sup>41</sup> WRC V1PC1-1497

<sup>42</sup> Consequential to WRC V1PC1-1497

<sup>43</sup> Federated Farmers V1PC1-172

<sup>44</sup> Ballance PC1-6862, FANZ PC1-9712

- specified in a Farm Environment Plan either associated with a resource consent, or in specific requirements established by participation in a Certified Industry Scheme<sup>45</sup>; and
- b. ~~Undergo~~ 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 the consent holder is a member of a Certified Sector Scheme or not it is established with a resource consent or through Certified Industry Schemes<sup>46</sup>; and
- b2. Are flexible and able to be updated so that continuous improvement, new technologies and mitigation practices can be adopted, such that diffuse discharges of contaminants of nitrogen, phosphorus, sediment and microbial pathogens further reduce over time.<sup>47</sup>
- c. ~~Establishing a Nitrogen Reference Point for the property or enterprise; and~~<sup>48</sup>
- 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; and~~<sup>49</sup>
- 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.~~<sup>50</sup> [PC1-10646]

### **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 rukunga roha i ngā pūnaha arumoni hei whakatupu hua whenua**

~~Provide for commercial vegetable production while reducing~~ Manage and require reductions in Reduce diffuse discharges of contaminants from commercial vegetable production activities 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 parcels of land for commercial vegetable production, within sub-catchments, while ~~reducing average contaminant discharges over time adopting sector-based initiatives and other mitigation measures to progressively reduce losses of~~ contaminants nitrogen, phosphorus, sediment and microbial pathogens; 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. ~~Establishes baselines for each property from the baseline period using commercial vegetable production data from each of the 5 years up to 2016 for;~~
- (i) ~~the maximum area of land in commercial vegetable production; and~~
- (ii) ~~the nitrogen and phosphorus surpluses (ie total applied nutrient inputs, less crop uptake) for each commercial vegetable production crop; and~~
- (iii) ~~sediment control measures; Establishing a Nitrogen Reference Point for each property or enterprise; and~~
- d. ~~Requiring a 10% decrease in the diffuse discharge of nitrogen and~~ Enabling commercial vegetable production that a clearly demonstrateds tailored reduction in the diffuse discharge of other contaminants nitrogen, phosphorus, sediment and microbial pathogens as measured against the baselines identified in bc above of all contaminants through adherence to Good Farming Practice, Farm Environment Plans and the water quality limits/targets of Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4relevant minimum standards; 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 for enterprises to encompass multiple properties within a single sub-catchment, provided that:~~
- (i) ~~a to d above are met; and~~

<sup>45</sup> South Waikato District Council PC1-12522

<sup>46</sup> Huirimu Farms Ltd PC1-5909, Ata Rangi PC1-6244, Southern Pastures Limited Partnership PC1-11197

<sup>47</sup> Federated Farmers V1PC1 -175

<sup>48</sup> Hort NZ PC1-10051, Hira Bhana and Co Ltd PC1-4020 (shifted to Pol 1 with modifications)

<sup>49</sup> Beef and Lamb PC1-12711 (shifted to Pol 1 with modifications)

<sup>50</sup> G and J Jeffries PC1-12802

- (iii) There is clear accounting against contaminant 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.<sup>51</sup> [PC1-10653]

### **Policy 3A: Certified Sector Schemes**

Waikato Regional Council will support the development of Certified Sector Schemes as groups or organisations responsible for preparing and monitoring the implementation of Farm Environment Plans by:

- a. Setting out minimum standards for Certified Sector Schemes in Schedule 2; and
- b. Establishing a process for approving Certified Sector Schemes based on their ability to meet the minimum standards, including entering into a contractual agreement with each Certified Sector Scheme to meet and maintain those standards; and
- c. Requiring independent audit of the performance of Certified Sector Schemes in preparing and monitoring the implementation of Farm Environment Plans for their members.<sup>52</sup>

### **Policy 4: ~~Future 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~~ To recognise that future regional plan changes or regional plans are likely to require all farming activities make further reductions in the take mitigation actions that will reduce diffuse discharges of contaminants of nitrogen, phosphorus, sediment and microbial pathogens in order for Objective 1 to be met.<sup>53</sup> Future necessary discharge reductions, as required by Table 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 must be considered when assessing resources consent applications.

~~To grant resource consents that authorise farming activities for a duration that will enable further reductions in contaminant losses to be implemented through replacement resource consents rather than by way of a review of consent conditions; unless the application demonstrates clear and enduring ongoing reductions of contaminant losses beyond those imposed in response to the short term water quality attribute states in Table 3.11-1 and the property is not in a Priority 1 sub-catchment.~~<sup>54</sup> [PC1-10655]

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

~~To recognise require that a~~ All farmers, businesses and communities<sup>55</sup> will need to contribute to achieving the water quality targets attribute states<sup>56</sup> in Table 3.11-1, and To achieve this:

- b. Changes in practices and activities need to start immediately<sup>57</sup>; and
- c. The rate of change will need to be staged over the coming decades to minimise social, economic<sup>58</sup> 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.<sup>59</sup> [PC1-10661]

~~Recognise that achieving the water quality attribute targets set out in Table 11-1 will need to be staged over 80 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.~~

<sup>51</sup> 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

<sup>52</sup> Huirimu Farms Ltd PC1-5909, Ata Rangi PC1-6244, Waipapa Farms Ltd and Carlyle Holdings Ltd PC1-4704

<sup>53</sup> C Barker PC1-3748

<sup>54</sup> Federated Farmers PC1-12754, FANZ PC1-11176

<sup>55</sup> M & R Johnston PC1-8099, K Stokes PC1-5248

<sup>56</sup> Winstone Aggregates PC1-3607

<sup>57</sup> Forest and Bird PC1-8257

<sup>58</sup> Charion Investment Trust PC1-7748

<sup>59</sup> WRC PC1-2985

## **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.<sup>60</sup>

## **Policy 7: Preparing for allocation in the future/Te Kaupapa Here 7: Kia takatū ki ngā tohanga hei ngā tau e heke mai ana **DELETED BY OFFICERS****

Prepare for further diffuse discharge reductions and any future property or enterprise-level allocation of diffuse discharges of ~~nitrogen, phosphorus, sediment and microbial pathogens~~ contaminants as required by Table 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 that will be required by subsequent regional plans, by implementing the policies and methods in this chapter. ~~To ensure this occurs, collect information and undertake 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 contaminant losses and the effect of contaminant discharges in different parts of the catchment that will assist in defining 'land suitability'.~~

~~Any future allocation should consider the following principles:~~

- ~~a. Land suitability<sup>61</sup> 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. [PC1-10667]~~

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

Prioritise the management of ~~diffuse discharges of contaminants of nitrogen, phosphorus, sediment and microbial pathogens~~ land and water resources by implementing Policies 2, 3 and 9, and<sup>62</sup> in accordance with the prioritisation of areas set out in Table 3.11-2, commercial vegetable production activities<sup>63</sup> ~~[OPTION and dairy farming<sup>64</sup>]~~, and the catchments of lakes and the Whangamarino Wetland.<sup>65</sup> Priority areas include:

- ~~a. Sub catchments where there is a greater gap between the water quality targets<sup>Δ</sup> in Objective 1 (Table 3.11-1) and current water quality; and~~
  - ~~b. Lakes Freshwater Management Units<sup>Δ</sup>; and~~
  - ~~c. Whangamarino Wetland.~~
- [PC1-10670]

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<sup>60</sup> Federated Farmers V1PC1-194

<sup>61</sup> 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<sup>Δ</sup> related to nitrogen, phosphorus, microbial pathogens and sediment for the surface waters that the land is hydrologically connected to; and
  - e) the desired values<sup>Δ</sup> 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.

<sup>62</sup> Ravensdown PC1-10119

<sup>63</sup> J Reeves & A Taylor PC1-8537

<sup>64</sup> Fonterra PC1-10489

<sup>65</sup> DoC PC1-10670

In addition to the priority sub-catchments listed in Table 3.11-2, the 75th percentile nitrogen leaching value dischargers in river and Whangamarino Wetland sub-catchments and 60<sup>th</sup> percentile in lake sub-catchments will also be prioritised for the development of Farm Environment Plans focussed on reducing diffuse discharge.  
[V1PC1-404]

**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:

- a. Engaging early with tangata whenua and with landowners, communities and potential funding partners in sub-catchments in line with the priority areas listed in Table 3.11-2, the sub-catchments of lakes and the Whangamarino wetland; 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 measures where they have the biggest effect on improving water quality; and
- d. Allowing, where multiple farming enterprises contribute to a mitigation measures, for the resultant reduction in diffuse discharges to be apportioned to each 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 consent; and each enterprise continues to reduce contaminants from individual properties at the same time; and
- e. Recognising the contribution of sub-catchments to whole of catchment water quality by using sub-catchment monitoring information to measure progress toward the freshwater objectives the achievement of water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 across the whole of each FMU. [PC1-10671]

**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 deciding resource consent applications for point source discharges of nitrogen, phosphorus, sediment and microbial pathogens to water or onto or into land, provide for the values of the Freshwater Management Unit and the water quality targets in Table 3.11-1 when considering the:

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

[PC1-10676]

**Policy 11: Application of Best Practicable Option ~~and mitigation or offset of effects~~ 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 contaminants of nitrogen, phosphorus, sediment or microbial pathogens to water or onto or into land in the Waikato and Waipa River catchments to, as a minimum,<sup>66</sup> adopt the Best Practicable Option\* to avoid or mitigate the adverse effects of the discharge, ~~at the time a resource consent application is decided~~<sup>67</sup>.

~~Where it is not practicable to avoid or mitigate all any<sup>68</sup> adverse effects, cannot be reasonably avoided, they should be mitigated, and where they cannot be reasonably mitigated, it is encouraged that<sup>69</sup> an offset measure may be proposed in an alternative location or locations to the point source discharge, 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:~~

- ~~a. Primary discharge does not result in any significant or<sup>70</sup> toxic adverse effect at the point source discharge location; and~~
- ~~b. Offset measure is for the same contaminant; and~~

<sup>66</sup> BT Mining PC1-9924

<sup>67</sup> Tangata Whenua – Waikato and Waipa River Iwi PC1-3349

<sup>68</sup> DoC PC1-10694

<sup>69</sup> DoC PC1-10694

<sup>70</sup> Fish & Game PC1-10887

- 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<sup>71</sup> or a Freshwater Management Unit<sup>71</sup> 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 mechanism<sup>71</sup>~~

[PC1-10694]

**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, ~~c~~Consider<sup>72</sup> 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 ~~likely~~<sup>73</sup> achievement of the short term ~~water quality targets attribute states<sup>74</sup> targets<sup>74</sup> in Table 3.11-1, 3.11-1a, 3.11-3 and 3.11-4~~ Objective 3 or the progression towards the 80-year ~~water quality targets attribute states<sup>74</sup> targets<sup>74</sup> in Objective 1~~Table 3.11-1, 3.11-1a, 3.11-3 and 3.11-4<sup>74</sup>, taking into account:

- a. The relative proportion of ~~contaminants 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~~<sup>75</sup> reduce the discharge of ~~contaminants 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~~<sup>76</sup> meet the water quality ~~targets attribute states<sup>74</sup> targets<sup>74</sup> 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\*<sup>77</sup>~~

[PC1-10738]

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

When determining an appropriate duration for any ~~point source discharge~~<sup>78</sup> consent granted consider the following matters:

- a. ~~The appropriateness of a longer consent duration~~ A consent term exceeding 25 years, ~~where~~Whether the applicant demonstrates that the discharge is consistent with achieving the ~~values of the Freshwater Management Unit and water quality targets attribute states~~ set out in Table 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 ~~the approaches set out in Policies 11 and 12 will be met~~<sup>79</sup>; 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); and
- d. ~~Any common catchment expiry date listed in Table XX and every 10 years thereafter. For consents granted within three years prior to the common catchment expiry date, the consent duration may be granted to align with the date 10 years after the common catchment expiry date.~~ [PC1-10739]

**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 ~~existing data and information and any existing Lake Catchment Plans as well as~~ Lake Catchment Plans prepared over the next 10 years,

<sup>71</sup> GBC Winstone PC1-2947

<sup>72</sup> Hamilton CC PC1-10843

<sup>73</sup> Tangata Whenua – Waikato and Waipa River Iwi PC1-3353

<sup>74</sup> Fonterra PC1-10609

<sup>75</sup> Hamilton CC PC1-10843

<sup>76</sup> Fish & Game PC1-10888

<sup>77</sup> Tangata Whenua – Waikato and Waipa River Iwi PC1-3353

<sup>78</sup> Mercury PC1-9577

<sup>79</sup> Forest & Bird PC1-8325

which will include collecting and using data and information to support improving the management of land use<sup>80</sup> activities in the lakes Freshwater Management Units<sup>^</sup>.[\[PC1-10742\]](#)

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

~~Restore and protect and make progress towards restoration of the Whangamarino Wetland through the reduction of both diffuse and point source discharges of contaminants entering the wetland system, to:~~

- ~~i. [Achieve the water quality limits/targets for Whangamarino Wetland in Tables 3.11-1 and 3.11-4;](#)~~
- ~~ii. [Protect the significant values and ecosystem health of the wetland system;](#)~~
- ~~iii. [Avoid further loss of bog wetland habitat;](#)~~
- ~~iv. [Increase the availability of mahinga kai; and](#)~~
- ~~v. [Support implementation of the Lake Waikare and Whangamarino Wetland Catchment Plan;](#)~~
- ~~vi. [Take account of the hydrological drivers that affect water quality.](#)~~

~~by reducing the diffuse discharge of contaminants nitrogen, phosphorus, sediment and microbial pathogens in the sub-catchments that flow into the wetland to:~~

- ~~a. [Reduce and minimise further loss of the bog ecosystem; and](#)~~
- ~~b. [Provide increasing availability of mahinga kai; and](#)~~
- ~~c. [Support implementation of any catchment plan prepared in future by Waikato Regional Council that covers Whangamarino Wetland.](#) [\[PC1-13150\]](#)~~

### **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;
- d. [The water quality limits/targets specified through Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4.](#)

~~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, 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 targets<sup>81</sup> to be achieved in Objective 3.](#) [\[PC1-10745\]](#)~~

### **Policy 17: Considering the wider context of 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 the Vision and Strategy and the values<sup>^</sup> for the Waikato and Waipa Rivers that fall outside the scope of Chapter 3.11, ~~but could be considered secondary benefits of methods carried out under this Chapter~~, including, but not limited to:

- a. Opportunities to enhance biodiversity, wetland values<sup>^</sup> and the functioning of ecosystems; and
- b. Opportunities to enhance access and recreational values<sup>^</sup> associated with the rivers.

### **Policy 18: Protection of indigenous fish habitat**

[To contribute toward achieving ecosystem health, ensure the protection of spawning habitats of inanga and other large-bodied galaxiids from the adverse effects of land use activities and stock access.](#) [\[PC1-10639\]](#)

<sup>80</sup> Tangata Whenua – Waikato and Waipa River Iwi PC1-3404

<sup>81</sup> Fonterra PC1-10451

## ALL DELETED BY OFFICERS

### 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 Waipa Rivers. [PC1-10750]

#### 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**[PC1-10751]

#### ~~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. ~~As a priority, b~~Build on the Shallow Lakes Management Plan and existing information, data and Lake Catchment Plans by developing Lake Catchment Plans and investigateing lake-specific options to ~~improve~~ achieve water quality limits/targets in Tables 3.11-1, 3.11-1a and 3.11-4 and ecosystem health, and manage pest species. In many instances, this may require an adaptive management approach.
- b. Prepare and implement Lake Catchment Plans, where catchment plans to do not already exist, 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.
- 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^ targets^ for each lake Freshwater Management Unit^.](#)~~
- h. [Evaluate options and implement a programme to reduce the impact of altered hydrological regimes on the water quality of wetland systems.](#)
- i. [Undertake a review of all resource consents that relate to the Lower Waikato Flood Control Scheme by 2021 to avoid or mitigate adverse effects on the Whangamarino wetland.](#) [PC1-10753]

#### 3.11.4.4a Benchmarking of wetland current state

[Waikato Regional Council, working with others, will undertake the benchmarking of wetland soil nutrients, surface water quality, sub-catchment sediment and nutrient inputs and wetland vegetation for all natural wetlands across the Waikato and Waipā River catchments by 2023.](#) [PC1-10633]

#### 3.11.4.5 Sub-catchment scale planning/Te whakamāherehere mō to 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 ~~contaminant 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. [PC1-10754]

#### 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. [PC1-10763]

#### 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. [Understanding current discharges, developing appropriate modelling tools to estimate contaminant discharges, and researching the spatial variability of land use and contaminant losses and the effect of contaminant discharges in different parts of the catchment that will assist in defining 'land suitability'.](#)
- b. Implementing processes that will support the setting of property or enterprise-level diffuse discharge limits in the future.
- c. Researching:
  - i. The quantum of contaminants that can be discharged at a sub-catchment and Freshwater Management Unit^ scale while meeting the Table 3.11-1 water quality attribute^ targets^.
  - 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^ targets^.

- d. Applying the following principles to any future allocation regime:
- i. Land with the same qualities and characteristics should receive the same allocation;
  - ii. Flexibility of land use is maintained;
  - iii. The allocation regime should be robust, technically feasible and simple to operate while being informed by sound science and reliable modelling information;
  - iv. The natural capitals of soils are a primary consideration;
  - v. Improvement of water quality remains a primary objective of the allocation;
  - vi. Clear regulation, monitoring and auditing of discharges within an allocation regime is critical; and
- e. ~~Land suitability<sup>82</sup> 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~~
- f. ~~Allowance for flexibility of development of tangata whenua ancestral land; and~~
- g. ~~Minimise social disruption and costs in the transition to the 'land suitability' approach; and~~
- vii. Future allocation decisions should take advantage of new data and knowledge, where appropriate. [PC1-10764]

### 3.11.4.x Initiate allocation of diffuse discharges

The Waikato Regional Council will initiate a framework for the allocation of diffuse discharges including reductions in nitrogen load according to specified timeframes for reductions by sub-catchment. The Waikato Regional Council will:

- a. Use science-based limits for the total allowable load of a contaminant for subcatchment which will meet the water quality objectives of the plan;
- b. Implement contaminant leaching rates for diffuse discharges from properties and enterprises by allocating to limits, targets and timeframes;
- c. Quantify nitrogen load reductions based on over-allocation of nitrogen beyond the science-based limit for sub-catchments; and
- d. Define timeframes for sub-catchment nitrogen load reductions to be made. [Fish and Game relief PC1-11007]

### 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 ~~contaminants nitrogen, phosphorus, sediment and microbial pathogens~~ at a **property** or **enterprise**-level to meet the targets<sup>^</sup> in the Objectives. [PC1-10765]

### 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. [PC1-10766]

<sup>82</sup> 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<sup>^</sup> related to nitrogen, phosphorus, microbial pathogens and sediment for the surface waters that the land is hydrologically connected to; and
- e) the desired values<sup>^</sup> 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.

#### 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<sup>^</sup>, including:

- a. Collecting information on nitrogen, phosphorus, sediment and **microbial pathogen** levels in the respective fresh water bodies in each Freshwater Management Unit<sup>^</sup> 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<sup>^</sup>.
- b. [Collecting water quality information in an integrated manner, within freshwater bodies and the Waikato River delta and estuary](#)
- c. [Collecting the following information in relation to wetlands:](#)
  - i. [Wetland and wetland buffer extents;](#)
  - ii. [Sediment and nutrient levels in wetlands;](#)
  - iii. [Wetland vegetation types and extents \(as an indicator of ecosystem health\)](#)
- d. [Collecting information on freshwater fish species the macroinvertebrate community index \(as indicators of ecosystem health\)](#)
- e. 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<sup>^</sup> targets<sup>^</sup>; and
- f. 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
- g. 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. [PC1-10767]

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

Waikato Regional Council will, [on a 3-yearly basis](#):

- a. [Utilise information gathered through method 3.11.4.10 to r](#)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<sup>^</sup> for the Waikato and Waipa 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**. [PC1-11052]

#### 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. [PC1-11053]

### 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 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. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and~~

~~Either:~~

- ~~3. The property area is less than or equal to 4.1 hectares; and~~
- ~~4. The farming activities do not form part of an enterprise being undertaken on more than one property; or~~

~~The property area Where the property area is greater than 4.1 hectares:~~

- ~~5. For grazed land, the stocking rate of the land is less than 6 stock units per hectare; and~~
- ~~6. No arable cropping occurs; and~~
- ~~7. The farming activities do not form part of an enterprise being undertaken on more than one property.<sup>83,84</sup>~~

#### 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 contaminants onto or into land in circumstances which may result in those contaminants entering water that would otherwise contravene section 15(1) of the RMA, which is not a permitted activity under Rule 3.11.5.2, is a permitted activity until:

1. ~~The later of 1 September 2021 or 6 months after this Plan becomes operative~~, for properties in Priority 1 sub-catchments listed in Table 3.11-2, and all properties in river and Whangamarino Wetland sub-catchments with a Nitrogen Reference Point greater than the 75th percentile nitrogen leaching value or lake sub-catchments with a Nitrogen Reference Point greater than the 60<sup>th</sup> percentile nitrogen leaching value; and
2. ~~The later of 1 March 2025 or 1 year after this Plan becomes operative~~ for properties in Priority 2 sub-catchments listed in Table 3.11-2;<sup>85</sup> and
3. 1 January 2026 for properties in Priority 3 sub-catchments listed in Table 3.11-2;  
subject to the following conditions:
  1. The property is registered with the Council in conformance with Schedule A; and
  2. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and
  3. No commercial vegetable production occurs; and
  4. A Nitrogen Reference Point is produced for the property in conformance with Schedule B; and
  5. Full electronic access to Overseer or any other software or system that models or records diffuse contaminant losses for the farming land use authorised by this rule is granted to the Council; ~~and~~<sup>86</sup>
6. 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 activities; or
  2. Any farming activity other than dairy farming to dairy farming; or
  3. Any farming activity to Commercial Vegetable Production<sup>87</sup>; ~~and~~
7. The discharge of any contaminant is managed to ensure that after reasonable mixing, either by itself or in combination with the same similar or other contaminants, it does not give rise to any of the following effects on receiving waters:
  - (a) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - (b) any conspicuous change in the colour or visual clarity;

<sup>83</sup> Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

<sup>84</sup> H Oatway PC1-6524

<sup>85</sup> Beef + Lamb V1PC1-1719, J Craig PC1-9675, Drummon Dairy Holdings Ltd PC1-5652, K and A Reese PC1-7784

<sup>86</sup> WRC V1PC1-218

<sup>87</sup> Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

- [\(c\) any emission of objectionable odour;](#)
- [\(d\) the rendering of fresh water unsuitable for consumption by farm animals;](#)
- [\(e\) any significant adverse effects on aquatic life. \[PC1-11054\]](#)

### 3.11.5.2 Permitted Activity Rule – ~~Other~~ **Low intensity farming activities/Te Ture mō ngā Mahi e Whakaaetia ana – Ētehi atu mahi i runga pāmu**

#### **Rule 3.11.5.2 - Permitted Activity Rule – ~~Other~~ Low intensity farming activities**

The use of land for farming activities ~~(excluding commercial vegetable production)~~ [and the associated diffuse discharge of contaminants nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water and the associated diffuse that would otherwise contravene section 15\(1\) of the RMA](#) 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,<sup>88</sup> is a permitted activity subject to the following conditions:

#### A. For all properties:

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
- 2A. ~~The farming activities do not form part of an enterprise; and~~
- 2B. ~~No commercial vegetable production occurs; and~~
- 2C. ~~No dairy farming or grazing of dairy cattle occurs; and~~
- 2D. ~~No feedlots or sacrifice paddocks are used on the property; and~~
- 2E. ~~No more than 5% of the land used for farming is used for cropping, including winter forage crops; and<sup>89</sup>~~
- 2F. [The discharge of any contaminant is managed to ensure that after reasonable mixing, either by itself or in combination with the same similar or other contaminants, it does not give rise to any of the following effects on receiving waters:](#)
  - [\(a\) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;](#)
  - [\(b\) any conspicuous change in the colour or visual clarity;](#)
  - [\(c\) any emission of objectionable odour;](#)
  - [\(d\) the rendering of fresh water unsuitable for consumption by farm animals;](#)
  - [\(e\) any significant adverse effects on aquatic life \[PC1-11054\]](#)

#### B3. ~~Where the property area is less than or equal to 20 hectares; or:~~

- 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).<sup>90</sup>~~

#### C4. ~~Where the property or enterprise area is greater than 20 hectares, and either:~~

1. ~~The stocking rate of the land is less than 6 stock units per hectare; or~~
2. ~~The only farming activity occurring on the property is the raising, training or housing of horses; or<sup>91</sup>~~
3. ~~The stocking rate of the land is greater than 6 stock units but less than 10 stock units per hectare; and<sup>92</sup>~~
  - 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;~~

<sup>88</sup> Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

<sup>89</sup> J Alcock and J Easton PC1-9217, L Ashton PC1-7032, G Gleeson PC1-6410

<sup>90</sup> P Hurley PC1-1088, Federated Farmers V1PC1-338

<sup>91</sup> G Kilgour PC1-1906, R Cave PC1-3900

<sup>92</sup> P Keeling PC1-5497, Fonterra V1PC1-765

- whichever is the lesser, over the whole property or enterprise when assessed in accordance with Schedule B; and<sup>93</sup>
- c. No part of the property or enterprise over 15 degrees slope is cultivated; and ~~or~~
- ~~c1. No part of the property over XX degrees of slope is<sup>94</sup> 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); and<sup>95</sup>~~
- ~~f5. For all properties greater than 4.1 hectares, fFrom 31 March 2019 30 November 2020, in addition to the requirements of Schedule A, the following information is must be provided to the Waikato Regional Council by 1 September each year:~~
- ~~a. The monthly average Annual stock numbers of each stock class from 1 July to 30 June in the following year; and~~
- ~~b. Tonnes and type of Annual fertiliser applied from 1 July to 30 June in the following year use; and~~
- ~~c. Tonnes of and type of Annual brought in animal feed brought onto the property in the previous 12 months; and<sup>96</sup>~~
- ~~g. Full electronic access to Overseer or any other software or system that models or records diffuse contaminant losses for the farming land use authorised by this rule is granted to the Council; and<sup>97</sup>~~
- ~~h. 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 the conditions of this Rule within 20 working days of the request (unless otherwise agreed in writing by Council).<sup>98</sup>~~

<sup>93</sup> Fonterra V1PC1-765, Balle Bros Group PC1-11423, Hill Country Farmers Group PC1-7845

<sup>94</sup> Hill Country Farmers PC1-7845

<sup>95</sup> G Holmes PC1-4693, Huirimu Farms Ltd PC1-5908, A McGovern PC1-8319

<sup>96</sup> Consequential to Ballance PC1-6570, FANZ PC1-10642

<sup>97</sup> WRC V1PC1-218

<sup>98</sup> Shifted from within the rule ((3)(c)).

## OPTION

### ~~3.11.5.2A — Controlled Activity Rule — Medium intensity farming/~~

#### ~~Rule 3.11.5.2A — Controlled Activity Rule — Medium intensity farming~~

~~The use of land for farming, which is not a permitted activity under Rules 3.11.5.1A to 3.11.5.2, is a controlled activity subject to the following conditions:~~

- ~~1. The property is registered with the Council in conformance with Schedule A; and~~
- ~~2. A Nitrogen Reference Point is produced for the property 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 farming activities do not form part of an enterprise; and~~
- ~~5. No commercial vegetable production occurs; and~~
- ~~6. Full electronic access to Overseer or any other software or system that models or records diffuse contaminant losses for the farming land use authorised by this rule is granted to the Council; and~~
- ~~7. 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 Council at the time the resource consent application is lodged; and~~
- ~~8. Either:
  - ~~a. The Nitrogen Reference Point is not exceeded; or~~
  - ~~b. The stocking rate of the land is no greater than 18 stock units per hectare and has not increased above the stocking rate during the Reference Period in Schedule B; and~~~~
- ~~6. 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 activities; or~~
  - ~~2. Any farming activity other than dairy farming to dairy farming; or~~
  - ~~3. Any farming activity to Commercial Vegetable Production~~~~

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

- ~~i. The content, compliance with and auditing of the Farm Environment Plan.~~
- ~~ii. The actions and timeframes to achieve Good Farming Practices or better in order to reduce the diffuse discharge of contaminants nitrogen, phosphorus, sediment or microbial pathogens to water or to land where they may enter water.~~
- ~~iii. For enterprises, the procedures and limitations, including Nitrogen Reference Points, to be applied to land that enters or leaves the enterprise.~~
- ~~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 of the resource consent.~~
- ~~vi. The timeframe and circumstances under which the consent conditions may be reviewed.~~
- ~~vii. Procedures for reviewing, amending and re-approving the Farm Environment Plan.~~

## OPTION

### **3.11.5.3 Permitted Restricted Discretionary Activity Rule—Farming activities with a Farm Environment Plan under a Certified Industry Sector 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 Restricted Discretionary Activity Rule—Farming activities with a Farm Environment Plan under a Certified Industry Sector 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 Sector 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 restricted discretionary 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 Sector Scheme meets the criteria set out in Schedule 2 and has been approved by the Chief Executive Officer of the Waikato Regional Council as meeting the standards set out in Schedule 2; 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, and is provided to the Waikato Regional Council at the time the resource consent application is lodged; and as follows:~~
  - a. ~~By 1 July 2020 1 March 2022 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 1 March 2025 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~~
- 5a. ~~Full electronic access to Overseer or any other software or system that records farm data and models or records diffuse contaminant losses for the farming land use authorised by this rule is granted to the Waikato Regional Council; and~~
- 5b. ~~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 or enterprise from:~~
  1. ~~Woody vegetation to farming activities; or~~
  2. ~~Any farming activity other than dairy farming to dairy farming; or~~
  3. ~~Any farming activity to Commercial Vegetable Production~~
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.~~

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

- i. ~~The content, compliance with and auditing of the Farm Environment Plan.~~
- ii. ~~The actions and timeframes to achieve Good Farming Practices or better in order to reduce the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens to water or to land where they may enter water.~~
- iii. ~~The effects, including cumulatively, of diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens, particularly where the activity may lead to an increase in the discharge of one or more contaminants.~~
- iv. ~~For enterprises, the procedures and limitations, including Nitrogen Reference Points, to be applied to land that enters or leaves the enterprise.~~
- v. ~~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.~~
- vi. ~~The term of the resource consent.~~
- vii. ~~The timeframe and circumstances under which the consent conditions may be reviewed.~~
- viii. ~~Procedures for reviewing, amending and re-approving the Farm Environment Plan.~~

### 3.11.5.4 ~~Controlled Restricted Discretionary 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 Restricted Discretionary 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 contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene section 15(1) of the RMA nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water, which is not a permitted activity under Rules 3.11.5.1A to 3.11.5.2, is a Restricted Discretionary permitted<sup>99</sup> activity until:~~

- ~~1. 1 January 2020 1 September 2021 for properties or enterprises in Priority 1 sub-catchments listed in Table 3.11.2~~
- ~~2. 1 January 2023 1 September 2024 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;<sup>100</sup>~~

~~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~~
- ~~4. A Farm Environment Plan has been prepared in conformance with Schedule 1 and has been approved by a Certified Farm Environment Planner, or prepared under a Certified Sector Scheme, and is provided to the Council at the time the resource consent application is lodged; and<sup>101</sup>~~
- ~~5. Cattle, horses, deer, sheep, goats and pigs are excluded from water bodies in accordance with Schedule C; and<sup>102</sup>~~
- ~~6. Full electronic access to Overseer or any other software or system that models or records diffuse contaminant losses for the farming land use authorised by this rule is granted to the Waikato Regional Council; and<sup>103</sup>~~
- ~~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 or enterprise from:~~
  - ~~1. Woody vegetation to farming activities; or~~
  - ~~2. Any farming activity other than dairy farming to dairy farming; or~~
  - ~~3. Any farming activity to Commercial Vegetable Production<sup>104</sup>~~

~~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.~~

~~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, compliance with and auditing of the Farm Environment Plan.~~
- ~~ii. The actions and timeframes to achieve Good Farming Practices or better in order to for undertaking mitigation actions that maintain or reduce the diffuse discharge of contaminants nitrogen, phosphorus, sediment or microbial pathogens to water or to land where they may enter water.~~
- ~~iii. The effects, including cumulatively effects, of diffuse discharge of contaminants nitrogen, phosphorus, sediment and microbial pathogens, particularly where the activity may lead to an increase in the discharge of one or more contaminants.~~

<sup>99</sup> H G and S J Brooks PC1-86, Denzie, B PC1-3617

<sup>100</sup> Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

<sup>101</sup> Previously part of rule (condition a) with addition of Certified Sector Schemes.

<sup>102</sup> Previously part of rule (condition d)

<sup>103</sup> WRC V1PC1-218

<sup>104</sup> Fonterra PC1-10644

- ii. For enterprises, the procedures and limitations, including Nitrogen Reference Points, to be applied to land that enters or leaves the enterprise.
- 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.~~
- iv. Where the Nitrogen Reference Point exceeds the 75th percentile nitrogen leaching value for rivers and Whangamarino Wetland sub-catchments or 60<sup>th</sup> percentile nitrogen leaching value for lake sub-catchments, actions, timeframes and other measures to ensure the diffuse discharge of nitrogen is reduced so that it does not exceed the 75<sup>th</sup> relevant percentile nitrogen leaching value by 1 July 2026.
- v. The term 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 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.
- ix. Information to be provided to show that the property is being managed in a way that would not cause an increase in loss of contaminants, which may include annual Overseer modelling for the property or enterprise, or information on matters such as stocking rate, fertiliser application, imported feed and cropping

**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:**

Consent applications will be considered without notification, and without the need to obtain written approval of affected persons.<sup>105</sup>

[V1PC1-420]

**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 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 discretionary 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. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and
- 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]; and
  - iii. quantification of nitrogen and phosphorus surpluses for each commercial vegetable production crop and a description of sediment control measures; and

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 for which consent is sought for commercial vegetable production must not exceed the maximum land area of the property or properties ~~enterprise~~ that was used for commercial vegetable production during the period 1 July ~~2006~~ 2011 to 30 June 2016; and
- 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~~

<sup>105</sup> Forest and Bird PC1-8208

- h. A Farm Environment Plan for the property or enterprise prepared in conformance with Schedule 1 and approved by a Certified Farm Environment Planner is provided to the Waikato Regional Council at the time the resource consent application is lodged that, at a minimum, shows:
- i. Good Farming Practice;
  - ii. Adherence to any relevant minimum standards; and
  - iii. That losses of nitrogen, phosphorus and sediment that do not exceed the maximum annual losses that were occurring during the 5 years up to 2016; and
- i. Full electronic access to Overseer or any other software or system that models or records diffuse contaminant losses for the farming land use authorised by this rule is granted to the Waikato Regional Council<sup>106</sup>

~~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, compliance with 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 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, 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.~~
- v. ~~The 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 any resource consent and the Farm Environment Plan.~~
- vii. ~~The time frame and circumstances under which the 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.~~

**Notification:**

Consent applications will be considered without 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.<sup>107</sup>

~~**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 Waipa 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.~~

<sup>106</sup> WRC V1PC1-218

<sup>107</sup> J L and R J Ashby V1PC1-866, Balle Bros Group PC1-11426, G and J Jeffries PC1-7240, K McLaughlin PC1-6018, Moerangi Trust PC1-4279, PLUG PC1-11178

**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 ~~conditions (1) to (5a) of Rule 3.11.5.3 or~~ conditions (1) to (6) of Rule 3.11.5.4 and any associated diffuse discharge of contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene section 15(1) of the RMA is a Discretionary activity.<sup>108</sup> [PC1-11054]

### **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 (5b) of Rule 3.11.5.3 or~~ condition (7) of Rule 3.11.5.4 and any associated diffuse discharge of contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene section 15(1) of the RMA is a non-complying activity.<sup>109</sup> [PC1-11054]

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 Waipa 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.<sup>110</sup>

### **3.11.5.8 Permitted Activity Rule —~~Authorised Diffuse Discharges~~**

~~The diffuse discharge of nitrogen, phosphorus, sediment and or microbial contaminants from farming onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene section 15(1) of the RMA is a permitted activity, provided the following conditions are met:~~

1. ~~the land use activity associated with the discharge is authorised under Rules 3.11.5.1 to 3.11.5.7; and~~
2. ~~the discharge of a contaminant is managed to ensure that after reasonable mixing it does not give rise to any of the following effects on receiving waters:~~
  - ~~(a) any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or~~
  - ~~(b) any conspicuous change in the colour or visual clarity; or~~
  - ~~(c) the rendering of fresh water unsuitable for consumption by farm animals; or~~

<sup>108</sup> Fonterra PC1-10506

<sup>109</sup> Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

<sup>110</sup> Forest and Bird PC1-8214

~~(d) any significant adverse effects on aquatic life.<sup>111</sup>~~

### **3.11.5.9 Non-Complying Activity Rule – Unauthorised Diffuse Discharges**

~~The diffuse discharge of nitrogen, phosphorus, sediment and or microbial contaminants from farming onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene section 15(1) of the RMA that does not meet one or more of the conditions of Rule 3.11.5.8 is a non-complying activity.<sup>112</sup>~~

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<sup>111</sup> Ata Rangi PC1-11127, Southern Pastures Limited Partnership PC1-11070

<sup>112</sup> Ata Rangi PC1-11127, Southern Pastures Limited Partnership PC1-11070

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

[The purpose of this schedule is to provide baseline information on land use activities in the Waikato and Waipā Catchments as they were at 22 October 2016 \[PC1-11060\].](#)

Properties with an area greater than ~~2 hectares~~ 4.1 hectares<sup>113</sup> (excluding urban properties) must be registered with the Waikato Regional Council in the following manner:

1. Registration must occur between ~~1 September 2018~~ 1 May 2020 and 31 March 2019 ~~by 30 November 2020~~.
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 (unless otherwise agreed in writing by Council) if requested by the Council,<sup>114</sup>
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 current and any previous land property<sup>115</sup> owner as at 22 October 2016, if different, 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 as at 22 October 2016,<sup>116</sup>
  - c. Physical address of the property as at 22 October 2016.
  - 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 as at 22 October 2016.
  - f. Where the land is used for grazing, and no NRP is required under this Plan,<sup>117</sup> the annual average and maximum<sup>118</sup> stocking rate of animals grazed on the land as at 22 October 2016.
  - g. If the property forms part of an enterprise as at 22 October 2016, the name of that enterprise.<sup>119</sup>
6. Properties that graze livestock as at 22 October 2016 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.

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<sup>113</sup> WRC PC1-3536

<sup>114</sup> WRC PC1-3536

<sup>115</sup> WRC PC1-3536

<sup>116</sup> Waipa DC PC1-3225

<sup>117</sup> WRC V1PC1-216

<sup>118</sup> J Liefing PC1-7166

<sup>119</sup> Waipa DC PC1-3225

## Schedule B - Nitrogen Reference Point/Te Āpitianga B – Te tohu ā-hauota

A property or enterprise with a cumulative area greater than 20 hectares (or any property or enterprise used for commercial vegetable production) must have a Nitrogen Reference Point calculated as follows:

- a. The Nitrogen Reference Point must be calculated by a Certified Farm Nutrient Advisor ~~to determine~~ by modelling the amount of nitrogen being leached from the property or enterprise during the relevant reference period specified in clause f), except 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 Rule 3.11.5.6 or 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 calculated using the ~~current~~ most recent version of the OVERSEER® Model as the default model (~~or any other models may be approved for use~~ by the Chief Executive of the Waikato Regional Council, if justified on a case by case basis). The Nitrogen Reference Point must be updated using the initial reference data whenever a new version of the OVERSEER® Model, 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 by electronic output file from~~ the OVERSEER® or other approved model to calculate the Nitrogen Reference Point, and where the OVERSEER® Model is used, it must be calculated using the OVERSEER® Best Practice Data Input Standards ~~2016~~ or replacement technical guidance that relate to the version of the OVERSEER® model being used, with the exceptions and inclusions set out in ~~Schedule B Table 1 a~~ Waikato Regional Council Nitrogen Reference Point Guide. 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 Nitrogen Reference Point Analysis (inputs and outputs) and the Nitrogen Reference Point data must be provided published to Waikato Regional Council within the period ~~1 September 2018~~ 1 May 2020 ~~and 31 March 2019~~ by 30 November 2020.
- f. The Nitrogen Reference Period ~~reference period~~ is the two financial years covering 1 July 2014/2015 and 2015/ to 30 June 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 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 NZGAP records; and
  - viii. The Nitrogen Reference Point Data as defined in Schedule B 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.

[V1PC1-423]

Table 1: Data input methodology for ensuring consistency of Nitrogen Reference Point data using the OVERSEER® Model<sup>120</sup>

OVERSEER® Parameter	Setting that must be used	Explanatory note
Farm model Pastoral and horticulture	<del>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</del>	<del>To capture the “whole farm” in one Overseer® file, where possible, to truly represent nitrogen losses from farm in the catchment area.</del>

<sup>120</sup> Ballance PC1-6570, FANZ PC1-10642, Beef and Lamb PC1-11506, Fonterra PC1-10517

	<p>the enterprise that are in the same sub-catchment.</p> <p>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.</p>	
<p>Location</p> <p>Pastoral and horticulture</p>	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	<p>Use "no differences between blocks" with the following exceptions:-</p> <ul style="list-style-type: none"> <li>▪ Grazed pines or other woody vegetation. In this case use "Relative yield" and set the grazed pine blocks to 0.4 (40%).</li> <li>▪ 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%).</li> </ul>	
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	<p>Only use the Climate Station tool</p> <p>For contiguous blocks use the coordinates from the location of the dairy shed or the middle of the farm area (for non dairy).</p> <p>For non contiguous blocks use individual blocks' climate station coordinates.</p>	
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 numbers for any necessary inputs to the OVERSEER® model (such default numbers will generally be around 75% of normal Freshwater Management Unit <sup>Δ</sup> average values for those inputs).	Some farms will not be able to supply data, therefore a default must be established.

## Schedule C - Stock exclusion/Te Āpitianga C – Te aukatinga o ngā kararehe

Except as provided by Exclusions I. ~~and II. and III.~~, cattle, horses, deer and pigs ~~stock~~<sup>121</sup> must be excluded from the water bodies listed in ~~6. i. to iv.~~ below as follows:

1. The water bodies ~~on-adjacent to~~ land with a slope of up to X degrees<sup>122</sup> must 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 constructed<sup>123</sup> 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 virtual<sup>124</sup> fences installed after 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. 1 metre from the outer edge of the bed for land with a slope of less than 15 degrees; and
  - b. 3 metres from the outer edge of the bed for land with a slope between 15 and 25 degrees; and
  - c. 10 metres from the outer edge of the bed for artificial or modified watercourses that are the full responsibility of a territorial authority or Waikato Regional Council for maintenance purposes.<sup>125</sup>
  - d. 20m from the edge of the bed for all lakes for all stock listed above as well as sheep and goats;
  - e. 10 metres from the edge of the bed for all permanent rivers and streams;
  - f. 5 metres from the edge of the bed for all intermittent/ephemeral rivers and streams;
  - g. 20 metres from the edge of the bed for all waterbodies where large galaxiids including inanga are known or predicted to spawn for all stock listed above as well as sheep and goats;
  - h. 10m from the edge of the bed of all natural wetlands for all stock listed above as well as sheep and goats;
  - i. 10m from the edge of bed of natural wetlands for the following activities:
    - (a) Fertiliser application
    - (b) Effluent discharge
    - (c) Drain construction or enhancement.

3. ~~Livestock~~ Cattle, horses, deer and pigs<sup>126</sup> must not ~~be permitted to~~<sup>127</sup> enter onto or pass across the bed of the water body, except when using a livestock crossing structure [OPTION TO ADD or when they are being supervised and actively driven across a water body in one continuous movement provided no more than one crossing per week occurs].

**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.<sup>128</sup>

4. For land use authorised under Rules 3.11.5.1 or 3.11.5.2, clauses 1 and 2 must be complied with:
  - 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 any river (including any stream and modified river or stream) or artificial watercourse that is permanently or intermittently flowing [OPTION TO ADD and where the bed is predominantly unvegetated and comprises exposed fine sediment, sand, gravel, boulders or similar material or aquatic vegetation]; 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.~~

<sup>121</sup> Dairy Goat Co-Operative (N.Z) Ltd PC1-4135

<sup>122</sup> Beef and Lamb PC1-11507

<sup>123</sup> Fish and Game PC1-11022

<sup>124</sup> Ashby, J L and R J V1PC1-879, Beef and Lamb V1PC1-1724

<sup>125</sup> Cl. 16 to ensure consistency with Rule 4.2.18.1 of the WRP

<sup>126</sup> Dairy Goat Co-Operative (N.Z) Ltd PC1-4135, A and S Dudin PC1-4910, A and M Goddard PC1-2341

<sup>127</sup> Fonterra V1PC1-757, Waipa DC PC1-3249, Waitomo DC PC1-10312

<sup>128</sup> Beef and Lamb PC1-11507

- iii. ~~Any wetland, including a constructed wetland.~~
- iv. ~~Any lake.~~<sup>129</sup>

Exclusions:

The following situations are excluded from clauses 1, 2 and 23:

- 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.~~<sup>130</sup>
- III. Constructed ponds or constructed wetlands in which deer or pigs wallow that are located at least 10m away from the bed of a water body and which are not connected by an overland flow path to a water body.

[PC1-11055]

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<sup>129</sup> DoC PC1-11055

<sup>130</sup> G Kilgour PC1-1923, A McGovern PC1-8327, Waipapa Farms Ltd and Carlyle Holdings Ltd PC1-4716

## Schedule 1 - 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, and B below, reviewed in accordance with Part C, and changed in accordance with Part D.

### **FEP Outcomes**

The outcome of any Farm Environment Plan is to manage land use activities in a way that reduces the diffuse discharge of contaminants from farming activities and achieves the water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4. To achieve this, a Farm Environment Plan shall clearly identify all sources of contaminants and identify the risk of those discharges entering streams, rivers, lakes and wetlands, the actions necessary to address the identified risks, and timeframes for those actions to be completed. [PC1-10647]

### **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; OR
2. An industry prepared FEP that:
  - a) includes the following minimum components:
    - i. the matters set out in Parts B below to the extent relevant; and
    - ii. performance measures that are capable of being reviewed as set out in Part C below
  - b) has been approved by the Chief Executive of Waikato Regional Council as meeting the criteria in (a) and capable of providing FEPs in a digital format, consistent with the council data exchange specifications.

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 CONTENT**

The FEP 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 land use activities;
  - b) Legal description of the land and any relevant farm identifiers such as dairy supply number.
2. A map(s) at a scale that clearly shows:
  - a) The boundaries of the property or land areas being farmed;
  - b) The boundaries of the main land management units or land uses ~~on~~ within the effective farmed area of the property or within the farm enterprise;
  - c) The location of any ~~Schedule C~~ waterbodies, river (including any stream or modified river or stream) or artificial watercourse that is permanently or intermittently flowing, the bed of any lake and any wetland, including a constructed wetland;
  - d) The location of riparian vegetation and fences adjacent to water bodies;
  - e) The location of any waterways where stock have access or there are stock crossings;
  - f) The location of any critical source areas and hotspots for contaminant loss to groundwater or surface water; and
  - g) The location(s) of any required actions to support the achievement of the objectives and principles listed in section 3, the objectives and policies of Chapter 3.11 and in particular the water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 and the outcome statement outlined above.
3. The FEP shall include for each objective and principle in section 4 below ~~3~~ 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 objectives and principles in Part B;
  - c) The records and evidence that must be kept that demonstrate performance and the achievement of an objective or principle listed in Part B.
4. An assessment of whether farming practices are consistent with each of the following objectives and principles; and
  - a. a description of those farming practices that will continue to be undertaken in a manner consistent with the objectives and principles;
  - b. A description of those farming practices that are not consistent with the objectives or principles, and a description of the time bound actions or practices that will be adopted to ensure the objectives or principles are met.

### **3a – Management area: Whole farm**

#### **Objective 1**

To manage farming activities according to good farming practice, and in a way that minimises the loss of contaminants from the farm [to achieve the water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4.](#)

#### **Principles**

1. [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.](#)
2. [Maintain accurate and auditable records of annual farm inputs, outputs and management practices.](#)
3. [Manage farming operations to minimise losses of ~~contaminants sediment, microbial pathogens, phosphorus and nitrogen~~ to water, and maintain or enhance soil structure.](#)
4. [Manage farming activities within Peat Lake FMUs in accordance with the good management practice guidance contained in 'For Peat's Sake'<sup>131</sup>.](#)

### **3b – Management Area: Nutrient management**

#### **Objective 2**

To minimise nutrient losses to water while maximising nutrient use efficiency [to ensure that the water quality limits/targets in Tables 3.11-1 Table 3.11-1a, 3.11-3 and 3.11-4 are achieved.](#)

#### **Principles**

5. [Monitor soil phosphorus levels and maintain them at or below the agronomic optimum for the farm system.](#)
6. [Manage the amount and timing of fertiliser inputs, taking account of all sources of nitrogen and phosphorus ~~including from the urine and faeces of animals~~, to match plant requirements and minimise risk of losses.](#)
7. [Store and load fertiliser to minimise risk of spillage, leaching and loss into waterbodies.](#)
8. [Ensure equipment for spreading fertilisers is well maintained and calibrated.](#)
9. [Store, transport and distribute feed to minimise wastage, leachate and soil damage.](#)

#### **Objective 3**

To [ensure farming activities are undertaken](#) in accordance with the nitrogen management requirements of PC1 [to ensure that the water quality limits/targets in Tables 3.11-1 Table 3.11-1a, 3.11-3 and 3.11-4 are achieved.](#)

#### **Principle**

[Either, where the property's NRP is ≤75<sup>th</sup> percentile for all river and Whangamarino Wetland sub-catchments, or ≤60<sup>th</sup> percentile in all lake sub-catchments :](#)

10. [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 75<sup>th</sup> percentile for all river and Whangamarino Wetland sub-catchments or >60<sup>th</sup> percentile in all lake sub-catchments](#)

10. [Farm in a manner that does not result in farm nitrogen losses exceeding the ~~relevant 75<sup>th</sup>%~~ percentile for the FMU and reduces diffuse losses of contaminants from the property.~~±or~~](#)

### **3c – Management Area: Waterways**

#### **Objective 4**

To minimise losses of ~~contaminants sediment, microbial pathogens, phosphorus and nitrogen~~ to waterways [to ensure that the water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 are achieved.](#)

#### **Principles**

11. [Identify risk of overland flow of ~~contaminants phosphorus, sediment and microbial pathogens~~ on the property and implement measures to ~~minimise~~-reduce losses of these to waterbodies.](#)
12. [Locate and manage farm tracks, gateways, water troughs, self-feeding areas, stock camps, wallows and other sources of run-off to minimise risks to water quality and ensure that the water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 are achieved.](#)
13. [Ensure the application of minimum setbacks of 10m from the edge of bed of natural wetlands for the following activities:](#)
  - a. [Fertiliser application](#)
  - b. [Drain construction or enhancement.](#)

#### **Objective 5**

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<sup>131</sup> Part 1 <https://www.waikatoregion.govt.nz/assets/PageFiles/3205/peatssakebookletpart1.pdf> &  
Part 2 <https://www.waikatoregion.govt.nz/assets/PageFiles/3205/peatssakebookletpart2.pdf>

To exclude [stock cattle, horses, deer, pigs, sheep and goats](#) from waterbodies and their margins and minimise [stock](#) damage to the beds and margins of all waterbodies including lakes, wetlands and riparian areas resulting from access by [cattle, horses, deer, pigs, sheep and goats](#).

#### **Principle**

14. ~~Exclude stock from waterbodies to the extent that it is compatible with land form, stock class and stock intensity. Where exclusion is not possible, mitigate impacts on waterways.~~
15. Exclude [stock cattle, horses, deer, pigs, sheep and goats](#) in a manner consistent with the requirements of [Schedule C](#).

### **3d – Management Area: Land and soil**

#### **Objective 6**

1. To minimise contaminant losses to waterways from soil disturbance and erosion to [ensure that the water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 are achieved](#).

#### **Principles**

1. [Avoid cultivation of slopes >15° unless contaminant discharges to water bodies exacerbated by that cultivation are demonstrated to be avoided](#)
2. [Manage any adverse effects of cultivation on slopes <15° through demonstrated erosion and sediment controls for each paddock that will be cultivated.](#)
3. [Require the application of minimum cultivation setbacks as follows:](#)
  - a. [20m from the edge of the bed for all lakes;](#)
  - b. [10 metres from the edge of the bed for all permanent rivers and streams;](#)
  - c. [5 metres from the edge of the bed for all intermittent/ephemeral rivers and streams](#)
  - d. [20 metres from the edge of the bed for all waterbodies where large galaxids including inanga are known or predicted to spawn;](#)
  - e. [10m from the edge of the bed of all natural wetlands;](#)
4. [Require the application of minimum 20m setbacks from forestry activities from:](#)
  - a. [all waterbodies within lake FMUs; and](#)
  - b. [all waterbodies within Upper Waikato River FMU and Middle Waikato River FMU.](#)
5. [Manage periods of exposed soil between crops/pasture to reduce risk of erosion, overland flow and leaching.](#)
6. [Manage or retire erosion-prone land to minimise soil losses through appropriate measures and practices.](#)
7. [Select appropriate paddocks for growing crops and intensive grazing, recognising and mitigating possible \[nitrogen and phosphorus, faecal, and sediment loss\]\(#\) contaminant loss from critical source areas to \[ensure that the water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 are achieved\]\(#\).](#)
8. [Manage grazing and crops to minimise losses from critical source areas.](#)
9. [Identify any man-made drainage channels that can and will be retired and restored to their pre-excavated state.](#)
10. [Identify mitigation strategies and time-based actions to reduce the amount of contaminants entering natural wetlands.](#)

### **3e – Management Area: Effluent**

#### **Objective 7**

To minimise contaminant losses to waterways from farm animal effluent to [ensure that water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 are achieved](#).

#### **Principles**

11. [Ensure the effluent system meets industry-specific Code of Practice or equivalent standard.](#)
12. [Ensure effluent storage facilities are sealed to restrict the seepage of effluent. The permeability of the sealing layer must not exceed  \$1 \times 10^{-9} \text{m/s}\$](#)
13. [Have sufficient storage available for farm effluent and wastewater and actively manage effluent storage levels including storage capacity to allow for the withholding of effluent during periods of prolonged wet weather when the soil moisture deficit is insufficient to allow for effluent irrigation to occur.](#)
14. [Ensure equipment for spreading effluent and other organic manures is well maintained and calibrated.](#)
15. [Apply effluent to pasture and crops at depths, rates and times to match plant requirements and soil water holding capacity and ensure not ponding occurs to ensure that water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 are achieved.](#)
16. [Ensure minimum setbacks of 10m from the edge of bed of natural wetlands for effluent discharge is achieved.](#)

### **3f – Management Area: Water and irrigation**

### **Objective 8**

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

#### **Principles**

17. Manage the amount and timing of irrigation inputs to meet plant demands and minimise risk of leaching and run off to ensure that water quality limits/targets in Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4 are achieved.
18. Design, check and operate irrigation systems to minimise the amount of water needed to meet production objectives.

### **PART C – FEP APPROVAL AND 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 PC1; and
2. Within 12 months of the granting of that consent application; and
3. In accordance with the 3-yearly annual review intervals or other such review requirements set out in the conditions of that any 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 objectives and principles set out in Part B of this schedule and the relevant objective and policies of Chapter 3.11 including Tables 3.11-1, 3.11-1a, 3.11-3 and 3.11-4.

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.

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 D – 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 remains consistent with Part B 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.

#### **Original DELETED by Officers**

~~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 outcome of any Farm Environment Plan is to manage land use activities in a way that reduces the diffuse discharge of contaminants from farming activities. To achieve this, a Farm Environment Plan shall clearly shall identify all sources of contaminants sediment, nitrogen, phosphorus and microbial pathogens, and identify the risk of those discharges entering streams, rivers, lakes and wetlands, the actions necessary to addresses the identified risks, 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.~~

~~B. 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 contaminants associated with the farming activities on the property discharging into any stream, river, lake or wetland, including both permanent and intermittent, 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 as follows:~~
    - ~~(a) 20m from the edge of the bed for all lakes for cattle, horses, deer, pigs, sheep and goats;~~
    - ~~(b) 10 metres from the edge of the bed for all permanent rivers and streams~~
    - ~~(c) 5 metres from the edge of the bed for all intermittent/ephemeral rivers and streams~~
    - ~~(d) 20 metres from the edge of the bed for all waterbodies where large galaxids including inanga are known or predicted to spawn for all lakes for cattle, horses, deer, pigs, sheep and goats;~~
    - ~~(e) 10m from the edge of the bed of all natural wetlands for all lakes for cattle, horses, deer, pigs, sheep and goats;~~
  - ~~iv. The provision for minimum setbacks of 10m from the edge of bed of natural wetlands for the following activities:~~
    - ~~(a) Fertiliser application~~
    - ~~(b) Effluent discharge~~
    - ~~(c) Drain construction or enhancement.~~
- (c) ~~A description of the critical source areas from which contaminants sediment, nitrogen, phosphorus and microbial pathogens are lost into stream, rivers, lakes and wetlands, 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 contaminants 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 contaminants 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 [contaminants 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.
  - ~~(g)~~ [The identification of any man-made drainage channels that can and will be retired and restored to their pre-excavated state.](#)
  - ~~(h)~~ [The identification of mitigation strategies and actions to reduce the amount of contaminants entering natural wetlands.](#)

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 uses<sup>132</sup> 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 any ephemeral wetlands; and](#)

<sup>132</sup> For dairy farms this might be the OVERSEER® blocks, for drystock farms this might be Land Use Capability blocks.

(g) The location of riparian vegetation and fences adjacent to water bodies; and

(h) 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. [This should include any mitigation strategies and actions to promote the reduction of contaminants entering natural wetlands.](#)

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:

No	Contaminant	Vegetable growing minimum standards
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"> <li>○ form of fertiliser applied</li> <li>○ rate of application</li> <li>○ placement of fertiliser</li> <li>○ timing of application</li> </ul>

[PC1-10647], [PC1-12394] [PC1-11055]

## Schedule 2 - Certification of ~~Industry Sector Schemes/~~Te ĀpitiHanga 2 – Te whakamana i ngā tohu o ngā Kaupapa Ahumahi

The purpose of this schedule is to set out the minimum standards for Certified Sector Schemes. ~~criteria against which applications to approve an industry scheme will be assessed.~~

~~The application~~ Applications for approval as a Certified Sector Scheme shall be lodged with the Waikato Regional Council, and ~~shall~~ include information that demonstrates how the following requirements standards 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 meet the standards set out in sections A to D below ~~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-~~

### **A. Governance and management**

Applications must include:

1. A description of the governance arrangements of the Scheme;
2. The contractual arrangements between the Scheme and its members;
3. A description of the process for gaining and ceasing membership;
4. A description of the Scheme area, including land uses, key environmental issues, property boundaries and ownership details of members' properties;
5. A procedure for keeping records of the matters in (4) above and advising WRC of changes;
6. A draft contractual agreement with the Waikato Regional Council that will require the Scheme, on certification, to meet and maintain the standards outlined in Section A to D below.

**B. Preparation of Farm Environment Plans**

Applications must include:

1. A statement of the Scheme's capability and capacity for preparing and certifying Farm Environment Plans that meet the requirements of Schedule 1, including the qualifications and experience of any personnel employed by or otherwise contracted to the Scheme to prepare or certify Farm Environment Plans;
2. An outline of timeframes for developing Farm Environment Plans for its members.

**C. Implementation of Farm Environment Plans**

Applications must include:

1. A statement of the Scheme's capability and capacity for monitoring and assessing the implementation of Farm Environment Plans, including the qualifications and experience of any personnel employed by or otherwise contracted to the Scheme to monitor or assess implementation of Farm Environment Plans;
2. A description of the expectations and agreements around landowner and property record-keeping;
3. A strategy for identifying and managing poor performance in implementing Farm Environment Plans.

**D. Audit**

Applications must include a description of an annual audit process to be conducted by an independent body, including:

1. A process for assessing performance against agreed actions in Farm Environment Plans at an individual property level;
2. A statement of how audit results will be shared with the Scheme's members and the wider community;
3. A process for assessing the performance of any personnel employed by or otherwise contracted to the Scheme to prepare, certify, and audit the implementation of Farm Environment Plans.

A summary audit report must be submitted to the Waikato Regional Council annually.<sup>133</sup>

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<sup>133</sup> Fonterra PC1-10561, Ata Rangi PC1-6244, DOC PC1-10648, Southern Pastures Limited Partnership PC1-11197

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

Table 3.11-1: Short term water quality limits and targets and long term numerical desired water quality limits and targets states<sup>134</sup> targets for the rivers and streams in the Waikato and Waipa River catchments/Ngā whāinga ā-tau taupoto, tauroa hoki mō te kounga wai i te riu o ngā awa o Waikato me Waipā [Consquential amendment]

Table 3.11-2 List of sub-catchments 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

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

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

**Table 3.11-1: Short term water quality limits and targets and long term numerical desired water quality states-limits and targets targets for the rivers and streams in the Waikato and Waipa River catchments/Ngā whāinga ā-tau taupoto, tauroa hoki mō te kounga wai i te riu o ngā awa o Waikato me Waipā [Consquential amendment]**

Within the rivers and streams in the Waikato and Waipa River catchments, excluding those rivers and streams within Lake FMU catchments, these limits and targets and 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 contaminants sediment, nitrogen, phosphorus and microbial pathogens, it is not intended, nor is it in the nature of water quality targets and the desired water quality states<sup>135</sup>, that they be used directly as receiving water compliance limits/standards. Reference should also be made to Method 3.2.4.1. [Consquential amendment]

#### 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 targets and 80 year desired water quality 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 water quality 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 mgNO<sub>3</sub>-N/L. The short term targets and 80 year desired water quality states targets are set at 0.740 mgNO<sub>3</sub>-N/L to reflect that there is to be no decline in water quality~~
- ~~the current state value for E.coli is 696 E.coli/100ml. The 80 year desired water quality state target is set at 540 E.coli/100ml and the short term target is set at 10% of the difference between the current state value and the 80 year desired water quality state target<sup>136</sup>.~~

~~The achievement of the attribute 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 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). [Consquential amendment]~~

<sup>134</sup> GBC Winstone PC1-3627

<sup>135</sup> GBC Winstone PC1-3627

<sup>136</sup> All recommended amendments to the Explanatory Note: GBC Winstone PC1-3627

**Table 3.11-1: Upper Waikato River Freshwater Management Unit [V1PC1-1006]**

Attributes																						
Catchment number	Protecti on priority (P) or fish (F) ranking	Site	Annual Median Chlorophyll a (mg/m <sup>3</sup> )		Annual Maximum Chlorophyll a (mg/m <sup>3</sup> )		Annual Median Total Nitrogen (mg/m <sup>3</sup> )		Annual Median Total Phosphorus (mg/m <sup>3</sup> )		Annual Median Nitrate (mg NO <sub>3</sub> -N/L)		Annual 95 <sup>th</sup> percentile Nitrate (mg NO <sub>3</sub> -N/L)		Annual Median Ammonia <sup>1</sup> (mg N/L)		Annual Maximum Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		95 <sup>th</sup> percentile E. coli (E. coli/100mL) NOF Band		Clarity (m) <sup>2</sup>	
			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 <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.450	0.450	0.530	0.530	0.003	0.003	0.009	0.009	92	92	1.8	3.0

<b>72</b>		<b>Torepatutah i Stm Vaile Rd Br</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	NA <sup>3</sup>	NA <sup>3</sup>	0.500	0.500	0.800	0.800	0.002	0.002	0.011	0.011	<u>216</u> <sub>C</sub>	<u>216</u> <sub>B</sub>	<u>1.0</u>	<u>1.6</u>
<b>65</b>		<b>Waiotapu Stm Homestead Rd Br</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	NA <sup>3</sup>	NA <sup>3</sup>	1.257	1.0	1.563	1.5	0.112	0.03	0.176	0.05	<u>281</u> <sub>C</sub>	<u>281</u> <sub>B</sub>	<u>1.0</u>	<u>1.6</u>
<b>69</b>		<b>Mangakara Stm (Reporoa) SH5</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	1.270	1.0	1.590	1.5	0.008	0.008	0.062	0.05	<u>158</u> <sub>4</sub> <sub>C</sub>	<u>540</u> <sub>B</sub>	0.9	1.0						
<b>62</b>		<b>Kawaunui Stm SH5 Br</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	2.580	2.4	2.850	1.5	0.006	0.006	0.079	0.05	<u>233</u> <sub>5</sub> <sub>C</sub>	<u>540</u> <sub>B</sub>	1.4	1.6						
<b>58</b>		<b>Waiotapu Stm Campbell Rd Br</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	0.915	0.915	1.100	1.100	0.291	0.24	0.315	0.05	<u>18</u> <sub>C</sub>	<u>18</u> <sub>B</sub>	1.2	1.6						
<b>59</b>		<b>Otamakoroe Stm Hossack Rd</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	0.740	0.740	1.190	1.190	0.006	0.006	0.024	0.024	<u>680</u> <sub>C</sub>	<u>540</u> <sub>B</sub>	1.2	1.6						
<b>56</b>		<b>Whirinaki Stm Corbett Rd</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	0.770	0.770	0.870	0.870	0.002	0.002	0.012	0.012	<u>98</u> <sub>C</sub>	<u>98</u> <sub>B</sub>	2.7	3.0						
<b>54</b>		<b>Tahunaatara Stm Ohakuri Rd</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	0.555	0.555	0.830	0.830	0.003	0.003	0.015	0.015	<u>783</u> <sub>C</sub>	<u>540</u> <sub>B</sub>	1.3	1.6						
<b>57</b>		<b>Mangaharake Stm SH30 (Off Jct SH1)</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	0.525	0.525	0.750	0.750	0.003	0.003	0.015	0.015	<u>684</u> <sub>C</sub>	<u>540</u> <sub>B</sub>	1.1	1.6						
<b>70</b>		<b>Waipapa Stm (Mokai) Tirohanga Rd Br</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	1.189	1.0	1.500	1.5	0.003	0.003	0.005	0.005	<u>114</u> <sub>7</sub> <sub>C</sub>	<u>540</u> <sub>B</sub>	1.2	1.6						
<b>71</b>	<b>P</b>	<b>Mangakino Stm Sandel Rd</b>	NA <sup>3</sup>	<u>NA</u> <sub>3</sub>	0.650	0.650	0.860	0.860	0.003	0.003	0.012	0.012	<u>251</u> <sub>C</sub>	<u>251</u> <sub>B</sub>	1.8	3.0						

<b>49</b>		<b>Whakauru Stm SH1 Br</b>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	0.260	0.260	0.450	0.450	0.003	0.003	0.033	0.033	<del>210</del> 6 C	<del>540</del> B	0.8	1.0
<b>48</b>		<b>Mangamingi Stm Paraonui Rd Br</b>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	2.760	2.4	3.12	1.5	0.091	0.03	0.296	0.05	<del>215</del> 1 C	<del>540</del> B	0.8	1.0
<b>45</b>		<b>Pokaiwhenua Stm Arapuni - Putaruru Rd</b>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	1.680	1.0	2.040	1.5	0.002	0.002	0.020	0.020	<del>136</del> 3 C	<del>540</del> B	1.3	1.6
<b>44</b>		<b>Little Waipa Stm Arapuni - Putaruru Rd</b>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	<u>NA</u> <sup>3</sup>	<u>NA</u> <sub>3</sub>	1.522	1.0	2.040	1.5	0.002	0.002	0.085	0.05	<del>137</del> 7 C	<del>540</del> B	1.5	1.6

<sup>1</sup> The annual median and annual maximum ammonia have been adjusted for pH

<sup>2</sup> Median black disc horizontal sighting range under baseflow conditions

<sup>3</sup> Attribute is not applicable to the sub-catchment

**Table 3.11-1: Middle Waikato River Freshwater Management Unit [V1PC1-1006]**

Catchment number	Protection priority (P) or fish (F) ranking	Site	Attributes																			
			Annual Median Chlorophyll a (mg/m <sup>3</sup> )		Annual Maximum Chlorophyll a (mg/m <sup>3</sup> )		Annual Median Total Nitrogen (mg/m <sup>3</sup> )		Annual Median Total Phosphorus (mg/m <sup>3</sup> )		Annual Median Nitrate (mg NO <sub>3</sub> -N/L)		Annual 95 <sup>th</sup> percentile Nitrate (mg NO <sub>3</sub> -N/L)		Annual Median Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		Annual Maximum Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		95 <sup>th</sup> percentile <i>E. coli</i> (E. coli/100mL) (NOF Band)		Clarity (m) <sup>2</sup>	
			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>33</u>	<u>P</u>	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	<del>340</del> C	<del>260</del> B	1.7	1.7
<u>25</u>	<u>P</u>	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	<del>774</del> C	<del>540</del> B	1.4	1.6
<u>32</u>		Karapiro Stm Hickey Rd Bridge	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.520	0.520	1.689	1.5	0.008	0.008	0.031	0.031	<del>4518</del> C	<del>540</del> B	0.9	1.0
<u>35</u>		Mangawhero Stm Cambridge-Ohaupo Rd	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	1.990	1.0	2.490	1.5	0.041	0.03	0.072	0.05	<del>2920</del> C	<del>540</del> B	0.3	1.0
<u>29</u>		Mangaonua Stm Hoeka Rd	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	1.455	1.0	1.878	1.5	0.036	0.03	0.051	0.05	<del>6372</del> C	<del>540</del> B	1.0	1.0
<u>31</u>		Mangaone Stm Annebrooke Rd Br	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	2.580	2.4	2.940	1.5	0.009	0.009	0.02	0.02	<del>2052</del> C	<del>540</del> B	0.9	1.0
<u>30</u>	<u>P</u>	Mangakotukutuku Stm Peacockes Rd	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.800	0.800	1.788	1.5	0.077	0.03	0.132	0.05	<del>11394</del> C	<del>540</del> B	0.5	1.0

Catchment number	Protection priority (P) or fish (F) ranking	Site	Attributes																					
			Annual Median Chlorophyll a (mg/m <sup>3</sup> )		Annual Maximum Chlorophyll a (mg/m <sup>3</sup> )		Annual Median Total Nitrogen (mg/m <sup>3</sup> )		Annual Median Total Phosphorus (mg/m <sup>3</sup> )		Annual Median Nitrate (mg NO <sub>3</sub> -N/L)		Annual 95 <sup>th</sup> percentile Nitrate (mg NO <sub>3</sub> -N/L)		Annual Median Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		Annual Maximum Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		95 <sup>th</sup> percentile E. coli (E.coli/100mL) NOF Band		Clarity (m) <sup>2</sup>			
			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	short term	80 year
28	P	Waitawhiriwhiri Stm Edgcumbe Street	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.880	0.880	1.240	1.24	0.256 0.24	0.24 0.03	0.318	0.05	5922 C	540 B	0.4 0.5	1.0
23	P & F	Kirikiroa Stm Tauhara Dr	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.815	0.815	1.572	1.5	0.096	0.03	0.183	0.05	2124 C	540 B	0.5	1.0	

<sup>1</sup> The annual median and annual maximum ammonia have been adjusted for pH.

<sup>2</sup> Median black disc horizontal sighting range under baseflow conditions

<sup>3</sup> Attribute is not applicable to the sub-catchment

Table 3.11-1: Lower Waikato River Freshwater Management Unit [V1PC1-1006]

Catchment number	Protection priority (P) or fish (F) ranking	Site	Attributes																			
			Annual Median Chlorophyll a (mg/m <sup>3</sup> )		Annual Maximum Chlorophyll a (mg/m <sup>3</sup> )		Annual Median Total Nitrogen (mg/m <sup>3</sup> )		Annual Median Total Phosphorus (mg/m <sup>3</sup> )		Annual Median Nitrate (mg NO <sub>3</sub> -N/L)		Annual 95 <sup>th</sup> percentile Nitrate (mg NO <sub>3</sub> -N/L)		Annual Median Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		Annual Maximum Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		95 <sup>th</sup> percentile E. coli (E.coli/100mL) NOF Band		Clarity (m) <sup>2</sup>	
			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
20	P	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	1944C	540B	0.9	1.0
9	P & F	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	1584C	540B	0.9	1.0
4		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	4955C	540B	0.7	1.0
22	P & F	Komakora u Stm Henry Rd	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	1.279	1.0	4.403.5	3.51.5	0.250.24	0.240.03	0.4190.40	0.400.05	3474C	540B	0.30.5	1.0
17	P & F	Mangawara Stm Rutherford Rd Br	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.765	0.765	2.760	1.5	0.103	0.03	0.172	0.05	3474C	540B	0.30.5	1.0

Catchment number	Protection priority (P) or fish (F) ranking	Site	Attributes																				
			Annual Median Chlorophyll a (mg/m <sup>3</sup> )		Annual Maximum Chlorophyll a (mg/m <sup>3</sup> )		Annual Median Total Nitrogen (mg/m <sup>3</sup> )		Annual Median Total Phosphorus (mg/m <sup>3</sup> )		Annual Median Nitrate (mg NO <sub>3</sub> -N/L)		Annual 95 <sup>th</sup> percentile Nitrate (mg NO <sub>3</sub> -N/L)		Annual Median Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		Annual Maximum Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		95 <sup>th</sup> percentile E. coli (E.coli/100m L) NOF-Band		Clarity (m) <sup>2</sup>		
			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>19</u>	<u>P &amp; F</u>	Awaroa Stm (Rotowaro) Sansons Br @ Rotowaro-Huntly Rd	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.70	0.70	1.19	1.19	0.02	0.02	0.08	0.05	1800 C	540 B	0.8	1.0
<u>14</u>	<u>P &amp; F</u>	Matahuru Stm Waiterimu Road Below Confluence	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.71	0.71	1.68	1.5	0.01	0.01	0.05	0.05	6147 C	540 B	0.4 0.5	1.0
<u>16</u>	<u>P</u>	Whangape Stm Rangiriri-Glen Murray Rd	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.00	0.00	0.69	0.69	0.00	0.00	0.13	0.05	584 C	540 B	0.3 0.5	1.0
<u>12</u>		<u>Waerenga Stm SH2 Maramarua Taniwha Rd</u>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.82	0.82	1.41	1.41	0.00	0.00	0.02	0.02	5098 C	540 B	0.9	1.0
<u>8</u>		<u>Whangamari no River Jefferies Rd Br</u>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.62	0.62	1.84	1.5	0.01	0.01	0.14	0.05	4712 C	540 B	0.6	1.0
<u>2</u>	<u>P</u>	<u>Mangatangi River SH2 Maramarua</u>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	0.11	0.11	1.12	1.12	0.00	0.00	0.03	0.03	5567 C	540 B	0.5	1.0

<u>1</u>	<u>P</u>	<u>Mangatawhiri River Lyons Rd Buckingham Br</u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>0.01</u> <u>3</u>	<u>0.01</u> <u>3</u>	<u>0.37</u> <u>0</u>	<u>0.37</u> <u>0</u>	<u>0.00</u> <u>3</u>	<u>0.00</u> <u>3</u>	<u>0.01</u> <u>1</u>	<u>0.01</u> <u>1</u>	<u>5108</u> <u>C</u>	<u>540</u> <u>B</u>	<u>1.6</u>	<u>1.6</u>
<u>10</u>	<u>P</u>	Whangamari no River Island Block Rd	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	0.07 5	0.07 5	0.70 0	0.70 0	0.01 1	0.01 1	0.05 4	0.05	<u>655</u> <u>C</u>	<u>540</u> <u>B</u>	<u>0.3</u> <u>0.6</u>	1.0
<u>3</u>		<u>Whakapipi Stm SH22 Br</u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u> <u>2</u>	<u>NA<sup>3</sup></u> <u>2</u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>3.39</u> <u>0</u>	<u>2.4</u>	<u>5.12</u> <u>0</u>	<u>3.5</u>	<u>0.00</u> <u>6</u>	<u>0.00</u> <u>6</u>	<u>0.08</u> <u>1</u>	<u>0.05</u>	<u>1773</u> <u>C</u>	<u>540</u> <u>B</u>	1.1	<u>1.1</u>
<u>7</u>		Ohaeroa Stm SH22 Br	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u> <u>3</u>	<u>NA<sup>3</sup></u> <u>3</u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	1.47 3	1.0	1.80 6	1.5	0.00 3	0.00 3	0.01 5	0.01 5	<u>4667</u> <u>C</u>	<u>540</u> <u>B</u>	0.8	1.0
<u>11</u>		Opuatia Stm Ponganui Rd	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u> <u>3</u>	<u>NA<sup>3</sup></u> <u>3</u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	0.74 0	0.74 0	1.06 0	1.06 0	0.00 5	0.00 5	0.01 6	0.01 6	<u>2898</u> <u>C</u>	<u>540</u> <u>B</u>	0.6	1.0
<u>5</u>		Awaroa River (Waiuku) Otaua Rd Br Moseley Rd	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u> <u>3</u>	<u>NA<sup>3</sup></u> <u>3</u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	<u>NA<sup>3</sup></u>	1.36 9	1.0	2.31 0	1.5	0.02 1	0.02 1	0.13 5	0.05	<u>1017</u> <u>C</u>	<u>540</u> <u>B</u>	<u>0.4</u> <u>0.5</u>	1.0
<u>NEW</u>		<u>Pungarehu Canal/Stream at Waerenga Rd or Farm Bridge</u>																				<u>04.-</u> <u>0.6</u>	

<sup>1</sup> The annual median and annual maximum ammonia have been adjusted for pH

<sup>2</sup> Median black disc horizontal sighting range under baseflow conditions

<sup>3</sup> Attribute is not applicable to the sub-catchment

**Table 3.11-1: Waipa River Freshwater Management Unit [V1PC1-1006]**

Catchment number	Protection priority (P) or fish (F) ranking	Site	Attributes											
			Annual Median Nitrate (mg NO <sub>3</sub> -N/L)		Annual 95 <sup>th</sup> percentile Nitrate (mg NO <sub>3</sub> -N/L)		Annual Median Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		Annual Maximum Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)		95 <sup>th</sup> percentile <i>E. coli</i> ( <i>E.coli</i> /100mL)		Clarity (m) <sup>2</sup>	
			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		Waipa River Mangaokewa Rd	0.380	0.380	0.600	0.600	0.003	0.003	0.017	0.017	2417 C	540 B	1.5	1.6
60		Waipa River Otewa	0.228	0.228	0.502	0.502	0.003	0.003	0.008	0.008	2036 C	540 B	2.1	2.1
51	F	Waipa River SH3 Otorohanga	0.370	0.370	1.050	1.050	0.004	0.004	0.020	0.020	3289 C	540 B	1.2	1.6
43		Waipa River Pirongia-Ngutunui Rd Br	0.565	0.565	1.270	1.270	0.008	0.008	0.023	0.023	4441 C	540 B	0.7	1.0
34	P	Waipa River Whatawhata Bridge	0.673	0.673	1.319	1.319	0.009	0.009	0.026	0.026	3657 C	540 B	0.6	1.0
26	F	Ohote Stm Whatawhata/Horotiu Rd	0.495	0.495	1.370	1.370	0.023	0.023	0.052	0.05	2142 C	540 B	0.6	1.0
36	P	Kaniwhaniwha Stm Wright Rd	0.350	0.350	0.890	0.890	0.007	0.007	0.022	0.022	1917 C	540 B	0.9	1.0
38		Mangapiko Bowman Rd Stm	1.369	1.0	2.490	1.5	0.022	0.022	0.076	0.03	7074 C	540 B	0.6	1.0
39		Mangaohoi Stm South Branch Maru Rd	0.230	0.230	0.390	0.390	0.003	0.003	0.008	0.008	943 C	540 B	1.6	1.6
37	P	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 C	540 B	3.3	3.3

40		Puniu River Bartons Corner Rd Br	0.650	0.650	1.280	1.280	0.007	0.007	0.029	0.029	<del>2790</del> C	<del>540</del> B	0.9	1.0
47		Mangatutu Stm Walker Rd Br	0.380	0.380	0.880	0.880	0.003	0.003	0.012	0.012	<del>738</del> C	<del>540</del> B	1.5	1.6
46		Waitomo Stm SH31 Otorohanga	0.520	0.520	0.830	0.830	0.008	0.008	0.025	0.025	<del>1453</del> C	<del>540</del> B	0.6	1.0
53		Mangapu River Otorohanga	0.860	0.860	1.360	1.360	0.015	0.015	0.057	0.05	<del>4284</del> C	<del>540</del> B	0.7	1.0
52	<u>F</u>	Waitomo Stm Tumutumu Rd	0.630	0.630	0.800	0.800	0.004	0.004	0.013	0.013	<del>2241</del> C	<del>540</del> B	1.1	1.6
63		Mangaokewa Stm Lawrence Street Br	0.530	0.530	0.980	0.980	0.004	0.004	0.013	0.013	<del>6224</del> C	<del>540</del> B	1.4	1.6

<sup>1</sup> The annual median and annual maximum ammonia have been adjusted for pH.

<sup>2</sup> Median black disc horizontal sighting range under baseflow conditions

<sup>3</sup> Attribute is not applicable to the sub-catchment

**NEW Table 3.11-1a** Additional water quality short term and 80 year targets for sub-catchments in the Waikato-Waipā Rivers to account for hard-bottomed stream types, and provide for conservation protection priorities (P), indigenous fish (F), ecosystem health and recreation and mahinga kai values. *N.B. where the current attribute state for a sub-catchment or waterbody reflects better water quality than the short term or 80 year targets, water quality shall be maintained in the current state and shall not be allowed to degrade towards the target.* [V1PC1-1006]

**Upper Waikato River Freshwater Management Unit**

Protection priority or fish rank : P/F	Periphyton biomass (NOF band) <sup>1</sup>		Periphyton %WCC <sup>2</sup>		DIN (mg/L) <sup>3</sup>		DRP (mg/L) <sup>3</sup>		Cyano-bacteria (NOF band/ % benthic) <sup>4</sup>		Fine deposited sediment % cover <sup>5</sup>		Dissolved oxygen (NOF band) <sup>6</sup>		Temperature max. <sup>7</sup>		pH range <sup>7</sup>		Toxicants / metals % species protection <sup>8</sup>		MCI <sup>9</sup>		
	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	short term	80 year	
Hard-bottomed stream type: HB																							
Waikato River Ohaaki Br					0.8	0.4	0.015	0.01	B	B			B	B	24	20	6-9	6.5-8.5	95	95	80	100	
Waikato River Ohakuri Tailrace Br					0.8	0.4	0.015	0.01	B	B			B	B	24	20	6-9	6.5-8.5	95	95	80	100	
Waikato River Whakamaru Tailrace					0.8	0.4	0.015	0.01	B	B			B	B	24	20	6-9	6.5-8.5	95	95	80	100	
Waikato River Waipapa Tailrace					0.8	0.4	0.015	0.01	B	B			B	B	24	20	6-9	6.5-8.5	95	95	80	100	
Pueto Stm Broadlands Rd Br					0.8	0.4	0.015	0.01					B	B	24	20	6-9	6.5-8.5	95	95	80	100	
Torepatutahi Stm Vaile Rd Br					0.8	0.4	0.015	0.01					B	B	24	20	6-9	6.5-8.5	95	95	80	100	
Waiotapu Stm Homestead Rd Br	HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6-9	6.5-8.5	95	95	80	100

Protection priority or fish rank: P/F	Periphyton biomass (NOF band) <sup>1</sup>		Periphyton %WCC <sup>2</sup>		DIN (mg/L) <sup>3</sup>		DRP (mg/L) <sup>3</sup>		Cyano-bacteria (NOF band/ % benthic) <sup>4</sup>		Fine deposited sediment % cover <sup>5</sup>		Dissolved oxygen (NOF band) <sup>6</sup>		Temperature max. <sup>7</sup>		pH range <sup>7</sup>		Toxicants / metals % species protection <sup>8</sup>		MCI <sup>9</sup>		
	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	short term	80 year	
<u>Mangakara Stm (Reporoa) SH5</u>					<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>					<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>	
<u>Kawaunui Stm SH5 Br</u>	<u>HB</u>	<u>B</u>	<u>B</u>	<u>40</u>	<u>30</u>	<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>	<u>20%</u>	<u>20%</u>	<u>25</u>	<u>20</u>	<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<u>Waiotapu Stm Campbell Rd Br</u>						<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>					<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<u>Otamakokore Stm Hossack Rd</u>	<u>HB</u>	<u>B</u>	<u>B</u>	<u>40</u>	<u>30</u>	<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>	<u>20%</u>	<u>20%</u>	<u>25</u>	<u>20</u>	<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<u>Whirinaki Stm Corbett Rd</u>	<u>HB</u>	<u>B</u>	<u>B</u>	<u>40</u>	<u>30</u>	<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>	<u>20%</u>	<u>20%</u>	<u>25</u>	<u>20</u>	<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<u>Tahunaatara Stm Ohakuri Rd</u>	<u>HB</u>	<u>B</u>	<u>B</u>	<u>40</u>	<u>30</u>	<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>	<u>20%</u>	<u>20%</u>	<u>25</u>	<u>20</u>	<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<u>Mangaharakeke Stm SH30 (Off Jct SH1)</u>						<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>					<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<u>Waipapa Stm (Mokai) Tirohanga Rd Br</u>						<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>					<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<u>Mangakino Stm Sandel Rd</u>	<u>HB P</u>	<u>B</u>	<u>B</u>	<u>40</u>	<u>30</u>	<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>	<u>20%</u>	<u>20%</u>	<u>25</u>	<u>20</u>	<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>

Protection priority or fish rank: P/F		Periphyton biomass (NOF band) <sup>1</sup>		Periphyton %WCC <sup>2</sup>		DIN (mg/L) <sup>3</sup>		DRP (mg/L) <sup>3</sup>		Cyano-bacteria (NOF band/ % benthic) <sup>4</sup>		Fine deposited sediment % cover <sup>5</sup>		Dissolved oxygen (NOF band) <sup>6</sup>		Temperature max. <sup>7</sup>		pH range <sup>7</sup>		Toxicants / metals % species protection <sup>8</sup>		MCI <sup>9</sup>	
		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	Short term	80 year
<a href="#">Whakauru Stm SH1 Br</a>	<b>HB</b>	<u>B</u>	<u>B</u>	<u>40</u>	<u>30</u>	<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>	<u>20%</u>	<u>20%</u>	<u>25</u>	<u>20</u>	<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<a href="#">Mangamingi Stm Paraonui Rd Br</a>						<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>					<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<a href="#">Pokaiwhenua Stm Arapuni - Putaruru Rd</a>	<b>HB</b>	<u>B</u>	<u>B</u>	<u>40</u>	<u>30</u>	<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>	<u>20%</u>	<u>20%</u>	<u>25</u>	<u>20</u>	<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>
<a href="#">Little Waipa Stm Arapuni - Putaruru Rd</a>	<b>HB</b>	<u>B</u>	<u>B</u>	<u>40</u>	<u>30</u>	<u>0.8</u>	<u>0.4</u>	<u>0.015</u>	<u>0.01</u>	<u>20%</u>	<u>20%</u>	<u>25</u>	<u>20</u>	<u>B</u>	<u>B</u>	<u>24</u>	<u>20</u>	<u>6 - 9</u>	<u>6.5 - 8.5</u>	<u>95</u>	<u>95</u>	<u>80</u>	<u>100</u>

Table 3.11-1a Middle Waikato River FMU [V1PC1-1006]

Protection priority or fish rank: P/F		Periphyton biomass (NOF band) <sup>1</sup>		Periphyton %WCC <sup>2</sup>		DIN (mg/L) <sup>3</sup>		DRP (mg/L) <sup>3</sup>		Cyano-bacteria (NOF band/ % benthic) <sup>4</sup>		Fine deposited sediment % cover <sup>5</sup>		Dissolved oxygen (NOF band) <sup>6</sup>		Temperature max. <sup>7</sup>		pH range <sup>7</sup>		Toxicants / metals % species protection <sup>8</sup>		MCI <sup>9</sup>	
		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	Short term	80 year
Waikato River Narrows Boat Ramp	P					0.8	0.4	0.01 5	0.01	B	B			B	B	24	20	6-9	6.5-8.5	95	95	80	100
Waikato River Horotiu Br	P					0.8	0.4	0.01 5	0.01	B	B			B	B	24	20	6-9	6.5-8.5	95	95	80	100
Karapiro Stm Hickey Rd Bridge						0.8	0.4	0.01 5	0.01					B	B	24	20	6-9	6.5-8.5	95	95	80	100
Mangawhero Stm Cambridge-Ohaupo Rd	HB	B	B	40	30	0.8	0.4	0.01 5	0.01	20%	20%	25	20	B	B	24	20	6-9	6.5-8.5	95	95	80	100
Mangaonua Stm Hoeka Rd	HB	B	B	40	30	0.8	0.4	0.01 5	0.01	20%	20%	25	20	B	B	24	20	6-9	6.5-8.5	95	95	80	100
Mangaone Stm Annebrooke Rd Br						0.8	0.4	0.01 5	0.01					B	B	24	20	6-9	6.5-8.5	95	95	80	100
Mangakotukutuku Stm Peacockes Rd	P	B	B	40	30	0.8	0.4	0.01 5	0.01	20%	20%	25	20	B	B	24	20	6-9	6.5-8.5	95	95	80	100
Waitawhiriwhiri Stm Edgumbe Street	P					0.8	0.4	0.01 5	0.01					B	B	24	20	6-9	6.5-8.5	95	95	80	100
Kirikiroa Stm Tauhara Dr	P & F					0.8	0.4	0.01 5	0.01					B	B	24	20	6-9	6.5-8.5	95	95	80	100

Tbale 3.11-1a Lower Waikato River Freshwater Management Unit [V1PC1-1006]

Protection priority or fish rank: P/F	Periphyton biomass (NOF band) <sup>1</sup>		Periphyton %WCC <sup>2</sup>		DIN (mg/L) <sup>3</sup>		DRP (mg/L) <sup>3</sup>		Cyano-bacteria (NOF band/ % benthic) <sup>4</sup>		Fine deposited sediment % cover <sup>5</sup>		Dissolved oxygen (NOF band) <sup>6</sup>		Temperature max <sup>7</sup>		pH range <sup>7</sup>		Toxicants / metals % species protection <sup>8</sup>		MCI <sup>9</sup>			
	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	Short term	80 year		
Hard-bottomed stream type: HB Waikato River Huntly-Tainui Br	P	N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	B	B	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Waikato River Mercer Br	P & F	N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	B	B	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Waikato River Tuakau Br		N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	B	B	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Komakorau Stm Henry Rd	P & F	N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Mangawara Stm Rutherford Rd Br	P & F	N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Awaroa Stm (Rotowaro) Sansons Br @ Rotowaro-Huntly Rd	P & F	N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Matahuru Stm Waiterimu Road Below Confluence	P & F	N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Whangape Stm Rangiriri-Glen Murray Rd	P	N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Waerenga Stm SH2 Maramarua		N/A	N/A	N/A	N/A	N/A	0.8	0.4	0.01 5	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100

Protection priority or fish rank: P/F	Periphyton biomass (NOF band) <sup>1</sup>		Periphyton %WCC <sup>2</sup>		DIN (mg/L) <sup>3</sup>		DRP (mg/L) <sup>3</sup>		Cyano-bacteria (NOF band/ % benthic) <sup>4</sup>		Fine deposited sediment % cover <sup>5</sup>		Dissolved oxygen (NOF band) <sup>6</sup>		Temperature max. <sup>7</sup>		pH range <sup>7</sup>		Toxicants / metals % species protection <sup>8</sup>		MCI <sup>9</sup>		
	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	Short term	80 year	
Hard-bottomed stream type: HB Whangamarino River Jefferies Rd Br	N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100	
Mangatangi River SH2 Maramarua	P HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Mangatawhiri River Lyons Rd Buckingham Br	P HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Whangamarino River Island Block Rd	P	N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Whakapipi Stm SH22 Br	HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Ohaeroa Stm SH22 Br		N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Opuatia Stm Ponganui Rd	HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Awaroa River (Waiuku) Otatau Rd Br Moseley Rd	P & F	N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100

Table 3.11-1a Waipā River Freshwater Management Unit [V1PC1-1006]

Protection priority or fish rank: P/F		Periphyton biomass (NOF band) <sup>1</sup>		Periphyton %WCC <sup>2</sup>		DIN (mg/L) <sup>3</sup>		DRP (mg/L) <sup>3</sup>		Cyano-bacteria (NOF band/ % benthic) <sup>4</sup>		Fine deposited sediment % cover <sup>5</sup>		Dissolved oxygen (NOF band) <sup>6</sup>		Temperature max. <sup>7</sup>		pH range <sup>7</sup>		Toxicants / metals % species protection <sup>8</sup>		MCI <sup>9</sup>	
		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	short term	80 year
Waipa River Mangaokewa Rd	HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Waipa River Otewa	HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Waipa River SH3 Otorohanga	HB F	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Waipa River Pirongia-Ngutunui Rd Br		N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Waipa River Whatawhata Bridge	P	N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Ohote Stm Whatawhata/Horoti u Rd	F	N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Kaniwhaniwha Stm Wright Rd	P	N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Mangapiko Bowman Rd Stm		N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Mangaohoi Stm South Branch Maru Rd	HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
Mangauika Stm Te Awamutu Borough W/S Intake	HB P	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100

Protection priority or fish rank: P/F	Periphyton biomass (NOF band) <sup>1</sup>		Periphyton %WCC <sup>2</sup>		DIN (mg/L) <sup>3</sup>		DRP (mg/L) <sup>3</sup>		Cyano- bacteria (NOF band/ % benthic) <sup>4</sup>		Fine deposited sediment % cover <sup>5</sup>		Dissolved oxygen (NOF band) <sup>6</sup>		Temperature max <sup>7</sup>		pH range <sup>7</sup>		Toxicants/ metals % species protection <sup>8</sup>		MCI <sup>9</sup>		
	Hard-bottomed stream type: HB	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	short term	80 year
<u>Puniu River Bartons Corner Rd Br</u>		N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
<u>Mangatutu Stm Walker Rd Br</u>	HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
<u>Waitomo Stm SH31 Otorohanga</u>		N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	80	100
<u>Mangapu River Otorohanga</u>		N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	100	100
<u>Waitomo Stm Tumutumu Rd</u>	F	N/A	N/A	N/A	N/A	0.8	0.4	0.015	0.01	N/A	N/A	N/A	N/A	B	B	24	20	6 - 9	6.5 - 8.5	95	95	100	100
<u>Mangaokewa Stm Lawrence Street Br</u>	HB	B	B	40	30	0.8	0.4	0.015	0.01	20%	20%	25	20	B	B	24	20	6 - 9	6.5 - 8.5	95	95	100	100

<sup>1</sup> Trophic state for rivers (periphyton biomass) is a compulsory attribute under the NPS-FM and must apply wherever there are hard-bottomed streams in the Waikato-Waipā catchments, to manage for ecosystem health values. Many hard-bottomed streams are identified by sub-catchment in Table 1, some streams have become heavily sedimented over time due to pastoral development with encroachment of grasses and weeds (Davies-Colley 1997), and a lack of riparian vegetation. Some of these catchments may be restored to a more hard-bottomed state over time if sediment, riparian margins and nutrients are managed appropriately. Periphyton can also grow on sand, plant and wood substrates within streams where nutrient and flow conditions are suitable.

<sup>2</sup> Periphyton cover is relevant for hard-bottomed streams. Numeric cover values are from the weighted composite cover (WCC) percent thresholds from Matheson et al. (2012) for ecological condition (40% as the bottom of the 'good' band as a short term target). The 80 year attribute state is set at the recreation threshold of 30%WCC.

<sup>3</sup> Dissolved inorganic nitrogen (DIN) and dissolved reactive phosphorus (DRP) targets were based on collation of multiple, similar, nutrient thresholds considered appropriate to manage the risk of periphyton exceeding the NOF biomass attribute or the %WCC attributes recommended from Matheson et al. (2012). Similar dissolved nutrient limits are recommended by Dr Canning in evidence for Fish and Game to provide for ecosystem health values and have been implemented in Regional Plans including: Plan Change 6: Tukituki catchment, Hawkes Bay; Plan change 6a: Otago Region; and the One Plan Schedule E targets, Manawatū-Whanganui Region. The limits/targets are the best approximation of nutrient concentrations appropriate to control periphyton biomass/cover and to lessen the dissolved nutrient contribution to growth of nuisance aquatic macrophytes in soft-bottomed streams.

<sup>4</sup> Cyanobacteria is a risk to people and animals and can proliferate on the bed of hard-bottomed streams as benthic growth, potentially becoming toxic. Thresholds from the MoH/MfE (2009) guidelines are recommended to safe-guard recreational and mahinga kai values in benthic systems. Systems susceptible to planktonic cyanobacteria have the NOF B band (green) applied.

<sup>5</sup> Deposited fine sediment is a critical attribute for ecosystem health in hard-bottomed streams. Short term targets are for recreational and aesthetic values, with 80 year targets set to provide for biodiversity and fish spawning aspects for ecosystem health.

<sup>6</sup> Dissolved oxygen is a critical attribute for all freshwater life and ecosystem health values. The NOF requires dissolved oxygen as an attribute below point sources, however, this is inadequate to provide for ecosystem health or aquatic life in all freshwater systems and the dissolved oxygen attribute should apply to all waterbodies.

<sup>7</sup> [Based on Davies-Colley et al. \(2012\) recommended temperature, pH and dissolved oxygen attributes for the NOF. Temperature thresholds is the summer-period measurement of the Cox-Rutherford Index \(CRI\), averaged over the five \(5\) hottest days \(from inspection of a continuous temperature record\). pH range does not apply to naturally acid or humic stained streams.](#)

<sup>8</sup> [Excludes nitrate and ammonia toxicity and applies to relevant metal and toxicant concentrations associated with the species protection levels as derived from the ANZECC \(2000\) guidelines or any updates to those guidelines. Particularly important to support ecosystem health in waterbodies affected by urban or industrial contaminants \(point-sourced or diffuse\).](#)

<sup>9</sup> [Based on Collier et al. \(2014\) macroinvertebrate attribute for the NOF and in response to the 2017 amendments to the NPS-FM requiring methods to address MCI <80 or sites showing a degrading trend.](#)

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

Lake FMU	Attributes								
	Annual Median Chlorophyll a (mg/m <sup>3</sup> )	Annual Maximum Chlorophyll a (mg/m <sup>3</sup> )	Annual Median Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)	Annual Maximum Ammonia <sup>1</sup> (mg NH <sub>4</sub> -N/L)	Annual Median Total Nitrogen (mg/m <sup>3</sup> )	Annual Median total Phosphorus (mg/m <sup>3</sup> )	95 <sup>th</sup> percentile <i>E. coli</i> ( <i>E. coli</i> /100mL)	80 <sup>th</sup> percentile cyanobacteria (biovolume mm <sup>3</sup> /L)	Clarity (m)
	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*
Dune	12	60	<u>0.24</u>	<u>0.40</u>	750	50	540	1.8 <sup>+</sup>	1
Riverine	12	60	<u>0.24</u>	<u>0.40</u>	800	50	540	1.8 <sup>+</sup>	1
Volcanic Zone	12	60	<u>0.24</u>	<u>0.40</u>	750	50	540	1.8 <sup>+</sup>	1
Peat	12	60	<u>0.24</u>	<u>0.40</u> <sup>137</sup>	750	50	540	1.8 <sup>+</sup>	1

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

+1.8mm<sup>3</sup>/L biovolume equivalent of potentially toxic cyanobacteria or 10mm<sup>3</sup>/L total biovolume of all cyanobacteria

<sup>1</sup> The annual median and annual maximum ammonia have been adjusted for pH

<sup>2</sup> Median black disc horizontal sighting range under baseflow conditions

**Table 3.11-2: List of sub-catchments 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**

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
<a href="#">Mangatangi</a>	<a href="#">2</a>	<a href="#">1</a>
<a href="#">Whakapipi</a>	<a href="#">3</a>	<a href="#">1</a>
<a href="#">Whangamarino at Jefferies Rd Br</a>	<a href="#">8</a>	<a href="#">1</a>
Whangamarino at Island Block Rd	10	1
Opuatia	11	1
<a href="#">Waerenga</a>	<a href="#">12</a>	<a href="#">1</a>
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
Kirikiroa	23	1
Waikato at Horotiu Br	25	1
Waikato at Bridge St Br	27	1
Waitawhiriwhiri	28	1
Mangakotukutuku	30	1
Mangawhero	35	1
Moakurarua	42	1
Little Waipa	44	1
Pokaiwhenua	45	1
Mangamingi	48	1
Waipa 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 Waipapa	64	1
Waiotapu at Homestead	65	1

Waipa at Mangaokewa Rd	68	1
Waipapa	70	1
Torepatutahi	72	1
Waikato at Tuakau Br	4	2
Waikato at Port Waikato	6	<del>2</del> 1
Waikato at Rangiriri	15	<del>2</del> 1
Awaroa (Rotowaro) at Sansons Br	19	<del>2</del> 1
Firewood	21	2
Komakorau	22	2
Waipa at Waingaro Rd Br	24	2
Mangaone	31	2
Waipa at SH23 Br Whatawhata	34	<del>2</del> 1
Kaniwhaniwha	36	2
Mangapiko	38	2
Puniu at Bartons Corner Rd Br	40	2
Waipa at Pirongia-Ngutunui Rd Br	43	2
Waitomo at SH31 Otorohanga	46	2
Whakauru	49	2
Tahunaatara	54	2
Otamakokore	59	2
Waipa at Otewa	60	2
Kawaunui	62	2
Waikato at Whakamaru	67	2
Mangakara	69	2
Mangakino	71	2
<u>Mangatawhiri</u>	<u>1</u>	<u>3</u>
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	<del>3</del> 1
Mangauika	37	3
Mangaohoi	39	3
Waikato at Karapiro	41	3

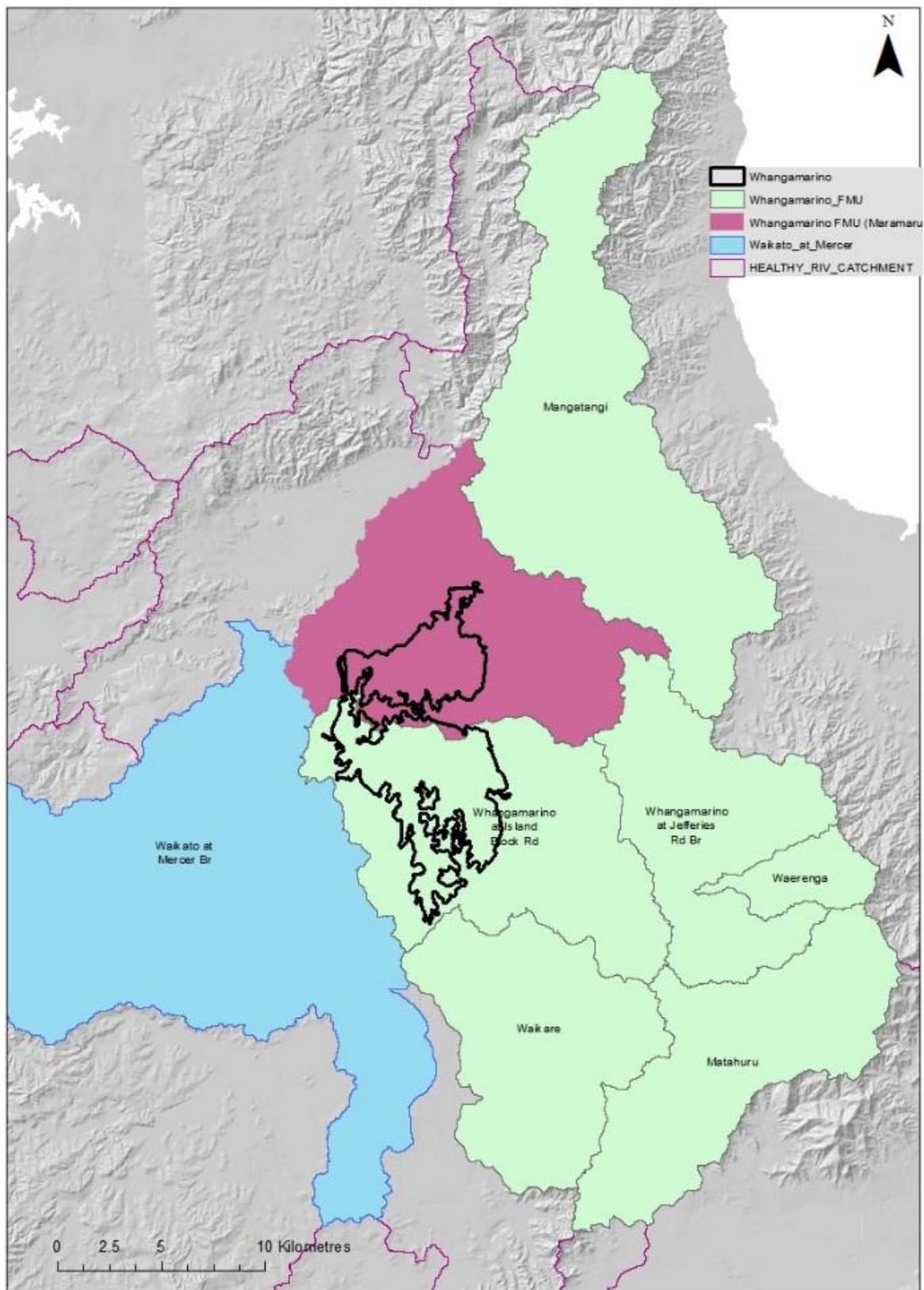
Mangatutu	47	3
Puniu at Wharepapa	50	3
Whirinaki	56	3
Waiotapu at Campbell	58	<del>3</del> <u>1</u>
Waikato at Ohakuri	66	3
Waikato at Ohaaki	73	<del>3</del> <u>1</u> <sup>138</sup>
Pueto	74	3
<a href="#">Pungarehu Canal at Waerenga Rd or Farm Bridge [V1PC1-1006]</a>	<a href="#">NEW</a>	<a href="#">1</a>

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

\* ~~part sub-catchment~~

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<sup>138</sup> DoC PC1-11067



***Map 3.11-1a Whangamarino Wetland Freshwater Management Unit [PC1-10504]***

Note – all green and pink polygons make up the proposed FMU

**Table 3.11-3 Primary Wetland attributes for Ecosystem Health (Water Quality) [PC1-10536]**

Wetland type	Wetland type description	Attribute relating to water quality (narrative target)			
		TP	TN	Sedimentation	Hydrological regime
<u>Bog</u>	<u>Bog wetlands are nutrient poor, poorly drained and aerated and usually acid. The water table is often close to or just above the ground surface, with rainwater the only source of water. These wetlands are dominated by indigenous vegetation that is representative of bogs in the Waikato, including peat forming plant species.</u>	<u>Nutrient status (TP) is within healthy range for the specific wetland type</u>	<u>Nutrient status (TN) is within healthy range for the specific wetland type</u>	<u>Inputs of external sediment are within healthy range for the specific wetland type</u>	<u>Hydrological regime, if altered, does not exacerbate water quality impacts</u>
<u>Fen</u>	<u>Fen wetlands are of low to moderate acidity and fertility and the water table is usually close to or just below the surface. These wetlands are dominated by indigenous vegetation that is representative of fens in the Waikato, including species adapted to low nutrient environments, such as sedges.</u>				
<u>Swamp</u>	<u>Swamp wetlands are generally of high fertility, receiving nutrients and sediment from surface run-off and ground water. These wetlands are dominated by indigenous vegetation that is representative of swamps in the Waikato, including vegetation cover that is often intermingled.</u>				
<u>Marsh</u>	<u>Marsh wetlands are mineral wetlands with good to moderate drainage that are mainly groundwater or surface water fed and characterised by fluctuation in the water table. Marsh wetlands can be differentiated from swamp wetlands by having better drainage, generally a lower water table and usually more mineral substrate and higher pH.</u>				

**Table 3.11-4 Whangamarino Wetland FMU Attributes and Targets** [PC1-1139]

In addition to the primary attributes for all wetlands, the following attributes are sought for the Whangamarino FMU specifically:

- Total Phosphorus – Median TP Concentration – applied to all monitoring sites in FMU
- Total Nitrogen – Median TN Concentration – applied to all monitoring sites in FMU
- Sediment – Mean Annual TSS Load – applied to the Pungarehu Canal/Stream monitoring site

The existing attributes in Table 3-11.1 will also apply.

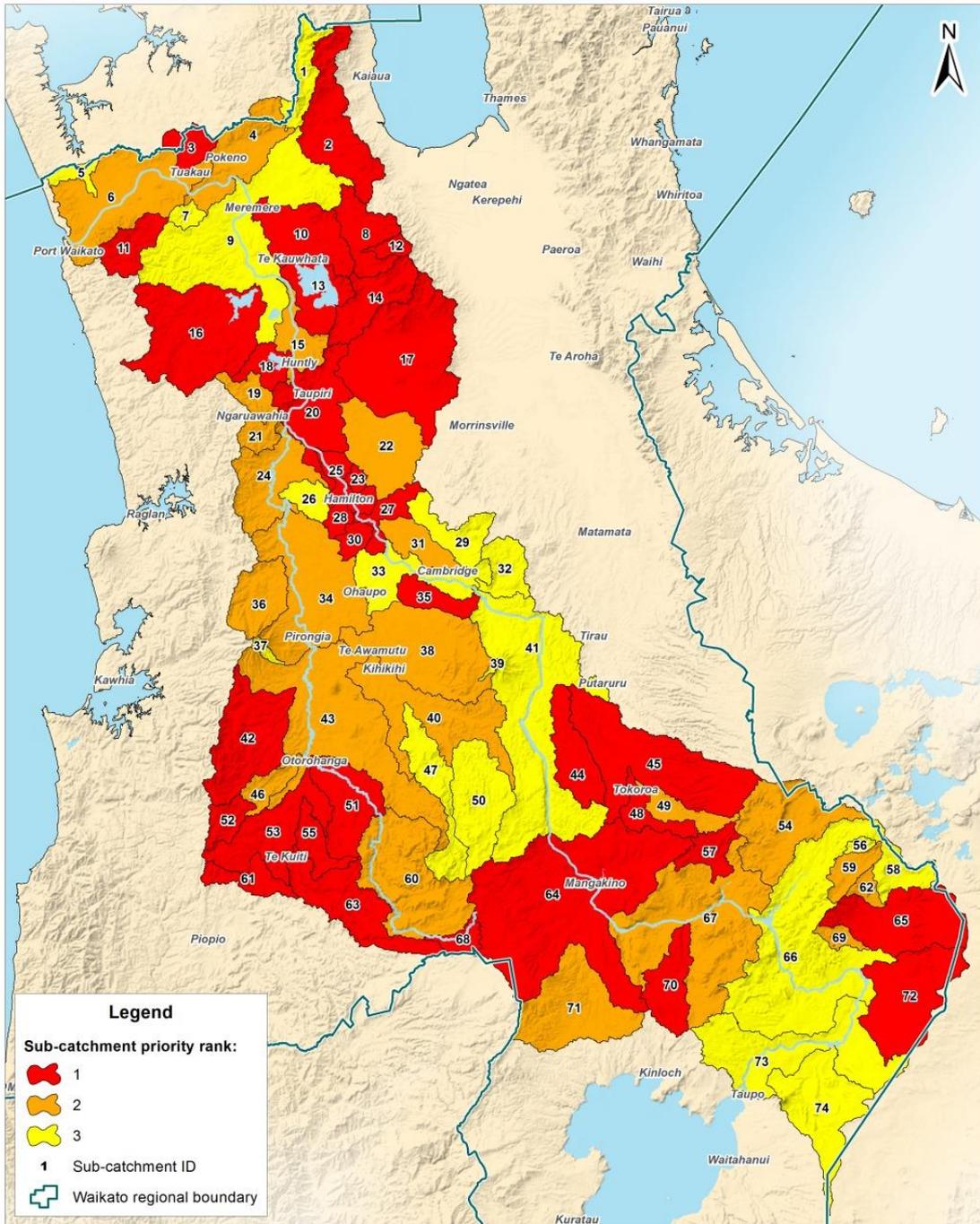
The 80 year targets for the additional primary attributes for the Whangamarino FMU are:

<u>The additional primary attributes for the Whangamarino FMU are:</u>	<u>80 Year Targets<sup>139</sup></u>	<u>Rationale</u>
<u>TP Median Conc (mg/m3)</u>	<u>50 mg/m3<sup>140</sup></u>	<u>The Whangamarino FMU is adversely affected by high phosphorus levels. The 80-year target of 50 mg/m3 aims to reduce TP overtime.</u>
<u>TN Median Conc (mg/m3)</u>	<u>750 mg/m3<sup>141</sup></u>	<u>The Whangamarino FMU is adversely affected by high nitrogen levels. The 80-year target of 750 mg/m3 aims to reduce TN overtime.</u>
<u>TSS Annual Load (T/yr)</u>	<u>&gt;30% reduction  (10% reduction by 2030)</u>	<u>Water quality in the Pungarehu Canal is driven by the concentration of sediment, as well as the discharge volume regulated by a control gate. Achieving only the water clarity target for this site will not achieve the ecosystem health outcome.</u>

<sup>139</sup> In addition to the 80 year targets, short-term targets of 10% reduction over 10 years, and 20% reduction over 20 years are required

<sup>140</sup> If site is in a better water quality state, 80 year target is to maintain

<sup>141</sup> If site is in a better water quality state, 80 year target is to maintain



**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

0 5 10 15 20 25 30 35 40 km

Scale at A3  
= 1:630,000

Created by: A. Jeffries  
 Date: 21/09/2016  
 Version: 1  
 Job No.: 33102  
 File: 33102 Sub-Catchments by Priority Rank.mxd

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

Updated map showing corrected regional boundaries, priority colours and lake colours to be inserted.

**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 Waipa 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.

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# PART C



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

## **Definition – 75<sup>th</sup> percentile nitrogen leaching value**

**60<sup>th</sup> percentile nitrogen leaching value:** The 60<sup>th</sup> percentile value (units of kg N/ha/year) of all of the Nitrogen Reference values for properties within each river Freshwater Management Unit (including properties within any lake Freshwater Management Unit within the relevant river Freshwater Management Unit and which is determined by the Chief Executive 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 data received by the Waikato Regional Council by 30 November 2020. This value is applied as the benchmark value to apply in lake Freshwater Management Unit sub-catchments.

**75<sup>th</sup> percentile nitrogen leaching value:** The 75<sup>th</sup> 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)<sup>142</sup> Freshwater Management Unit and which are determined by the Chief Executive 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 data<sup>143</sup> received by the Waikato Regional Council by 30 November 2020<sup>144</sup>. This value is applied as the benchmark value to apply in river Freshwater Management Unit sub-catchments.

## **Definition – Arable cropping**

**Arable cropping:** means the following arable crops:

- i. grain cereal, legume, and pulse grain crops
  - ii. herbage seed crops
  - oilseeds
  - iii. crops grown for seed multiplication for use in New Zealand or overseas
  - iv. 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 activities given current technology.~~

**Certified Farm Environment Planner:** ~~is a person or entity<sup>145</sup> certified by the Chief Executive Officer of Waikato Regional Council 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~~ three<sup>146</sup> years' relevant experience in agricultural and horticultural<sup>147</sup> ~~the management of pastoral, horticulture or arable farm systems; and~~
- b. a Certificate of Completion in Advanced Sustainable Nutrient Management in New Zealand Agriculture from Massey University or<sup>148</sup> completed an equivalent<sup>149</sup> advanced training or a tertiary qualification in sustainable nutrient management ~~(nitrogen and phosphorus)~~<sup>150</sup>; and
- c. ~~experience in soil conservation and sediment management;~~

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<sup>142</sup> Federated Farmers V1PC1-790

<sup>143</sup> DairyNZ PC1-10253

<sup>144</sup> N and C Prendergast PC1-1779, R Hathaway PC1-5399

<sup>145</sup> Forest and Bird PC1-8478

<sup>146</sup> Hill Country Farmers Group PC1-8072

<sup>147</sup> NZIPIM PC1-8445

<sup>148</sup> Ballance PC1-7113, FANZ PC1-10662, Ravensdown PC1-10187, Oji PC1-8854

<sup>149</sup> Ravensdown PC1-10187, FANZ PC1-10662

<sup>150</sup> NZIPIM PC1-8445

and agrees to follow the procedures and guidelines set out by Waikato Regional Council and audits of the Certified Farm Environment Planner's work by Waikato Regional Council show that the Planner is preparing and/or approving Farm Environment Plans in accordance with the procedures and guidelines.<sup>151</sup>

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

#### **Definition – Certified Farm Nutrient Advisor**

**Certified Farm Nutrient Advisor:** is a person or entity certified by the Chief Executive Officer of Waikato Regional Council ~~and listed on the Waikato Regional Council website as a certified farm nutrient advisor~~ and has the following qualifications and experience as meeting the following criteria:

- a. Is a certified as a Nutrient Management Adviser under the Nutrient Management Adviser Certification Programme Ltd; or<sup>152</sup> ~~Has completed nutrient management training to at least intermediate level, and~~
- b. Has completed nutrient management training to at least an advanced level<sup>153</sup>, and ~~h~~Has at least two years experience in nutrient management planning;<sup>154</sup>

and agrees to follow the procedures and guidelines set out by Waikato Regional Council and audits of the Certified Farm Nutrient Advisor's work by Waikato Regional Council show that that the Advisor is preparing robust and reliable nutrient loss reports.<sup>155</sup>

Note: Certified Farm Nutrient Advisors will be listed on the Waikato Regional Council's website.<sup>156</sup>

#### **Definition – Certified Industry Scheme/s**

**Certified Industry Sector**<sup>157</sup> **Scheme/s:** is a scheme group or organisation responsible for preparing and assisting with the implementation of Farm Environment Plans<sup>158</sup> that has been certified by the Chief Executive Officer of Waikato Regional Council and listed on the Waikato Regional Council website as meeting the standards<sup>159</sup> ~~assessment criteria and requirements~~ set out in Schedule 2 of Chapter 3.11.

#### **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.
- d. forestry.

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<sup>151</sup> Forest and Bird PC1-8478

<sup>152</sup> Ballance PC1-7090, FANZ PC1-10663, Ravensdown PC1-10199

<sup>153</sup> DairyNZ PC1-10251, Genetic Technologies Ltd PC1-3290, S.J. Williams PC1-5959

<sup>154</sup> Genetic Technologies Ltd PC1-3290, NZIPIM PC1-8446

<sup>155</sup> Forest and Bird PC1-8494

<sup>156</sup> A McGovern PC1-8292

<sup>157</sup> Mercury PC1-9684

<sup>158</sup> Maniapoto Maori Trust Board PC1-9338

<sup>159</sup> Fonterra PC1-10583

**Dairy Cattle:** means cows that are or have been used for milk production, whether they are being grazed on a milking platform or not.<sup>160</sup>

**Definition – Dairy Farming**

**Dairy Farming:** means farming of dairy cows on a **milking platform** for milk production<sup>161</sup>.

**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.

**Definition – Drain**

**Drain:** For the purposes of Chapter 3.11, means an artificially created open<sup>162</sup> 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 Farming**<sup>163</sup>: means pasture grazing beef cattle, dairy animals grazed off a **milking platform**, 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.

**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.~~

**Definition - Escherichia coli (E. coli)**

**Escherichia coli (E. coli)**<sup>164</sup>: 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 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; or<sup>165</sup>

<sup>160</sup> Consequential change to the relief sought by P Hurley PC1-1088, Federated Farmers V1PC1-338.

<sup>161</sup> Forest and Bird PC1-8292

<sup>162</sup> Fert NZ PC1-10668

<sup>163</sup> adapted from NIWA 2016. [https://www.niwa.co.nz/our-science/freshwater/tools/kaitiaki\\_tools/land-use/agriculture/dry-stock](https://www.niwa.co.nz/our-science/freshwater/tools/kaitiaki_tools/land-use/agriculture/dry-stock)

<sup>164</sup> Ministry of Health Drinking-water Standards for New Zealand 2005 (Revised 2008) definition pg 146

<sup>165</sup> Gourmet Mokai Ltd PC1-7250, Tuaropaki Trust PC1-3009

d. production or growing produce for consumption by the occupier of the property or their family.<sup>166</sup>

**Definition – Five year rolling average**

**Feedlot:** means the containment and feeding of livestock, covered or uncovered, for the purpose of finishing for meat production, and the activity precludes the maintenance of vegetative groundcover.<sup>167</sup>

**Five year rolling average**<sup>168</sup>: means the average of modelled nitrogen leaching losses predicted by OVERSEER<sup>®</sup> from the most recent 5 years.

**Definition – Forage crop**

**Winter**<sup>169</sup> **Forage crop:** means crops, annual or biennial, but excluding pasture species,<sup>170</sup> which are grown to be utilised by grazing or harvesting as a whole crop between 1 May and 30 September of each year.<sup>171</sup>

**Definition – Good Management Practice/s**

**Good Management Farming**<sup>172</sup> **Practice/s:** For the purposes of Chapter 3.11, means industry agreed and approved practices and actions undertaken on a property or enterprise that reduce or minimise the risk of contaminants entering a water body.

**Definition – Livestock crossing structure**

**Livestock crossing structure:** means a lawfully established structure ~~installed to allow~~ that enables<sup>173</sup> livestock to cross a water body such that the livestock do not enter or have access to the bed of the water body<sup>174</sup>.

**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/s**<sup>175</sup>: A microorganism capable of inducing illness in humans.

**Definition – Milking platform**

**Milking platform:** means that area devoted to feeding cows on a daily basis and includes land used for the growing of feed for the cows within the same property during the milking season<sup>176</sup>.

**Definition – Nitrogen Reference Point**

**Nitrogen Reference Point:** The nitrogen loss number (units of kg N/ha/year) that is derived from an OVERSEER<sup>®</sup> use protocol compliant OVERSEER<sup>®</sup> file that describes the **property** or farm **enterprise** and farm practices in an agreed year or years

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<sup>166</sup> H Clarke PC1-8466

<sup>167</sup> Consequential change to the relief sought by P Hurley PC1-1088, Federated Farmers V1PC1-338.

<sup>168</sup> *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*

<sup>169</sup> New Zealand Grain and Seed Trade Association PC1-1680

<sup>170</sup> Genetic Technologies Ltd PC1-3341, A McGovern PC1-8295

<sup>171</sup> New Zealand Grain and Seed Trade Association PC1-1680

<sup>172</sup> Ballance PC1-6862, FANZ PC1-9712

<sup>173</sup> WRC PC1-3672

<sup>174</sup> Fish and Game PC1-11017

<sup>175</sup> *Adapted from Ministry of Health. 2008. Drinking-water Standards for New Zealand 2005 (Revised 2008). Wellington*

<sup>176</sup> Pamu PC1-5938

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.

The nitrogen discharge benchmark established for a farm, when the farm system in place during the reference period is modelled using the most recent version of the Overseer model (or an alternative model approved by the Chief Executive Officer of the Waikato Regional Council) as described in Schedule B.<sup>177</sup>

#### **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:** A stationary or fixed facility from which contaminants are discharged or emitted. For the purposes of Chapter 3.11, ~~means discharges from a stationary or fixed facility, including~~ includes the irrigation onto land from consented industrial and municipal wastewater systems.<sup>178</sup>

**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.<sup>179</sup>

**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.<sup>180</sup>

#### **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.<sup>181</sup>

**Sacrifice Paddock:** means the containment of livestock in a paddock that precludes the maintenance of vegetative groundcover.<sup>182</sup>

#### **Definition – Setback**

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

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<sup>177</sup> Fonterra PC1-10580, Pamu PC1-5932

<sup>178</sup> Fonterra PC1-10593

<sup>179</sup> Trustees of Highfield Deer Park PC1-3978

<sup>180</sup> Trustees of Highfield Deer Park PC1-3978

<sup>181</sup> Federated Farmers V1PC1-807

<sup>182</sup> Consequential change to the relief sought by P Hurley PC1-1088, Federated Farmers V1PC1-338.

### 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 in<sup>183</sup> the following stocking rate table<sup>184</sup>:

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)		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
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

<sup>183</sup> WRC V1PC1-1535

<sup>184</sup> 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.

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

#### **Definition – Sub-catchment**

**Sub-catchment:** For the purposes of Chapter 3.11, means an area of land within the Waikato River catchment representing the contributing area draining to one of [6974](#)<sup>185</sup> locations in the stream and river network, and used as the basic spatial unit for analysis and modelling.

#### **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 catchment<sup>186</sup>, 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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<sup>185</sup> Refer to Map 3.11-2.

<sup>186</sup> Iwi of Hauraki V1PC1-455