SUBMISSION FORM

VARIATION 1 TO PROPOSED WAIKATO REGIONAL PLAN CHANGE 1 WAIKATO AND WAIPĀ RIVER CATCHMENTS

Waikato Regional Council
Te Kaunihera ā Rohe o Waikato

IMPORTANT NOTE

Save this PDF to your computer before answering. If you edit the original form from this webpage, your changes will not save. Please check or update your software to allow for editing. We recommend Acrobat Reader.

We need to receive your submission by 5pm, 23 May, 2018

YOUR NAME, ADDRESS FOR SERVICE AND CONTACT DETAILS (MANDATORY INFORMATION)

Name of Submitter (individual/organisation)	Horticulture New Zealand	
	Lucy Deverall	
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PLEASE INDICATE WHETHER YOU WISH TO SPEAK AT A HEARING

- (●) Yes, I wish to speak at the hearing in support of my submission.
- ( ) No, I do not wish to speak at the hearing in support of my submission.

JOINT SUBMISSION

- [✔] If others make a similar submission, please tick this box if you would consider presenting a joint case with them at the hearing.

TRADE COMPETITION AND ADVERSE EFFECTS (SELECT APPROPRIATE)

◯ I could / ◉ could not gain an advantage in trade competition through this submission. *Refer to last page for further information*

◯ I am / ◉ am not directly affected by an effect of the subject matter of the submission that:

a. adversely effects the environment, and

b. does not relate to the trade competition or the effects of trade competition.

IF YOU HAVE USED EXTRA SHEETS FOR THIS SUBMISSION PLEASE ATTACH THEM TO THIS FORM AND INDICATE BELOW

◉ Yes, I have attached 239 extra sheets. ◯ No , I have not attached extra sheets.

SIGNATURE - *NOTE A SIGNATURE IS NOT REQUIRED IF YOU MAKE YOUR SUBMISSION BY ELECTRONIC MEANS*

Signed Lucy Deverall Date 23/05/2018

Type name if submitting electronically

SUBMISSIONS CAN BE

Chief Executive, 401 Grey Street, Private Bag 3038, Waikato Mail Centre, Hamilton 3240

Waikato Regional Council, 401 Grey Street, Hamilton East, Hamilton

(07) 859 0998

healthyrivers@waikatoregion.govt.nz *Please note: Submissions received by email must contain full contact details.*

PLEASE CHECK that you have provided all of the information requested and if you are having trouble filling out this form, phone Waikato Regional Council on 0800 800 401 for help.

Personal information is used for administration and will be made public. All information collected will be held by Waikato Regional Council, with submitters having the right to access and correct personal information.

FORM 5 Clause 6 of First Schedule, Resource Management Act 1991

INFORMATION ABOUT WRITING A SUBMISSION ON A VARIATION OF A PROPOSED PLAN CHANGE

1. Trade competition

If you could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of part 1 of Schedule 1 of the Resource Management Act 1991 (RMA).

6 Making of submissions

(4) A person who could gain an advantage in trade competition through the submission may make a submission only if directly affected by an effect of the proposed policy statement or plan that –

a) adversely affects the environment; and

b) does not relate to trade competition or the effects of trade competition.

2. Privacy information

The Waikato Regional Council will make all submissions and further submissions including name and contact details publicly available at public libraries in the region, Council Offices and on Council's website. Any further submission, under the RMA, supporting or opposing your submission is required to be forwarded to you as well as Council.

Personal information will also be used for administration relating to the subject matter of the submissions, including notifying submitters of hearings and decisions. All information will be held by the Waikato Regional Council with submitters having the right to access and correct personal information.

3. Submission Content Review

Please note that the RMA states that your submission (or part of your submission) may be struck out if the authority is satisfied that at least one of the following applies to the submission (or part of the submission):

- It is frivolous or vexatious
- It discloses no reasonable or relevant case
- It would be an abuse of the hearing process to allow the submission (or the part) to be taken further
- It contains offensive language
- It is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

If you have questions about making a submission, please visit *waikatoregion.govt.nz/healthyrivers* to see our factsheet about Making a Submission.

SUBMISSIONS ON SPECIFIC PROVISIONS OF VARIATION 1 TO PROPOSED PLAN CHANGE 1

PROVISION *(e.g. Objective 4 or Rule 3.11.5.1):* _____

Do you support or oppose the provision? ◯ Support ◯ Support with amendments ◯ Oppose ◯ Oppose with amendments

DECISION SOUGHT *State clearly the decision and/or suggested changes you want council to make on the provision.*	**SUBMISSION** *State clearly the reasons for the decision you want council to make.*
The decision I would like the council to make regarding this provision is:	The reason for requesting this decision is:

Continue this Provision

Add a New Provision

SUBMISSION ON WAIKATO REGIONAL COUNCIL VARIATION 1 TO PLAN CHANGE 1: HEALTHY RIVERS WAI ORA PLAN FOR CHANGE

TO:	**WAIKATO REGIONAL COUNCIL**
SUBMISSION ON:	**VARIATION 1 TO PLAN CHANGE 1: HEALTHY RIVERS WAI ORA PLAN FOR CHANGE**
NAME:	HORTICULTURE NEW ZEALAND
POSTAL ADDRESS:	PO BOX 10 232 WELLINGTON

1. **Horticulture New Zealand's (HortNZ) submission and the decisions sought are detailed in the attached schedules and appendices:**

   Schedule 1: Horticulture in New Zealand
   Schedule 2: Submission
   Appendix 1: HortNZ's initial submission to PC1
   Appendix 2: Relief sought in track changes to PC1 Variation
   Appendix 3: A catchment collective approach
   Appendix 4: PC1 implementation feedback
   Appendix 5: Snapshots of a commercial vegetable crop rotation

2. **This submission is supported by Vegetables New Zealand Inc, Pukekohe Vegetable Growers Association and Parkers Gardens.**

3. **HortNZ wishes to be heard in support of this submission.**

4. **Background to HortNZ and its RMA involvement:**

   HortNZ was established on 1 December 2005, combining the New Zealand Vegetable and Potato Growers' and New Zealand Fruitgrowers' and New Zealand Berryfruit Growers Federations.

   The horticulture industry value is $8.8 billion and is broken down as follows:

Industry value		**$8.8bn**
Fruit exports	$4.36bn	
Vegetable exports	$617m	
Other horticulture export	$140m	
Total exports		**$5.1bn**
Fruit domestic	$1.8bn	

Vegetable domestic	$1.27bn	
Other horticulture export	$610m	
Total domestic		**$3.7bn**

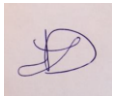
The benefits associated with horticultural production extend beyond the economic. The industry employs 60,000 people. The rural economy supports rural communities and rural production defines much of the rural landscape. Food production values provide a platform for long term sustainability of communities, through the provision of food security.

The vision of HortNZ is 'Healthy food for all forever' and the HortNZ mission is 'creating an enduring environment where growers prosper'. On behalf of its 5,600 active grower members HortNZ takes a detailed involvement in resource management planning processes as part of its National Environmental Policies.

HortNZ also works to raise growers' awareness of the RMA to ensure effective grower involvement under the Act. This includes both the planning process and through resource consent applications. HortNZ has invested significantly in science to develop evidence based policy and promote good management practice.

I confirm that I could not gain advantage in trade competition through this submission.

Thank you for the opportunity to submit.



Lucy Deverall

Environmental Policy Advisor – North Island
Horticulture New Zealand

Dated: 23 May 2018

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SCHEDULE 1: HORTICULTURE IN NEW ZEALAND

1. The current state in Waikato Region

There are over 100 growers based in the Waikato Region. This does not include those horticultural operations whose headquarters are based outside the region, but which have horticultural activities within Waikato.

A wide range of produce is grown in Waikato Region as shown from the census data below. Significantly, in 2014, Waikato produced 32% of New Zealand's domestic onions, 28% of domestic tomatoes and 19% of domestic potatoes[1].

The Agricultural Census is undertaken every five years and provides a high-level of insight into the amount of land in horticultural production (Fruit and Vegetables). While the latest Agriculture Census was in 2017, this data is not yet available so the following is based on the previous Agricultural Census in 2012.

While this data is of interest, it has limitations due the age of the census data and the fact that a number of growers requested information they provided to remain confidential. Therefore, this data should not be relied upon to define the full extent of horticulture within the District. It does however highlight the extensive range of fruits and vegetables grown in the Waikato Region.

Please note that HortNZ do not represent mushrooms or walnuts; however, they have been included in the tables below for completeness.

Figure 1: Distribution of fruit (area planted ha)

	Apples	Wine grapes	Kiwifruit	Summerfruit	Avocados	Citrus	Berryfruit	Nuts	Olives	Subtropical	Other	Total
Waikato	141	26	726	37	176	20+	342+	44+	55	79+	15	1,661+
New Zealand	8,845	34,562	12,757	2,276	4,149	1,857	2,598	1,344	1,657	1,265	396	71,706

Source: Statistics New Zealand Symbol: C = Confidential

Figure 2: Distribution of outdoor vegetables (area planted ha)

	Asparagus	Broccoli, Cab & Cauli	Carrots	Peas & Beans	Lettuce	Onions	Potatoes	Squash	Sweet corn	Other	Total
Waikato	459	75+	166	2+	73	1,837	2,074	C	42	298+	5,026+

[1] http://www.hortnz.co.nz/assets/Media-Release-Photos/HortNZ-Report-Final-A4-Single-Pages.pdf

New Zealand	820	3,622	2,047	7,858	1,250	5,718	11,578	6,837	4,664	5,313	49,707

Source: Statistics New Zealand Symbol: C = Confidential

Figure 3: Distribution of indoor vegetables (area planted m^2; 000)

	Capsicum	**Cucumber**	**Lettuce/Salad**	**Mushrooms**	**Tomatoes**	**All other veg & herbs**
Waikato	85	46	31	C	348	43
New Zealand	572	269	238	152	1,181	359

Source: Statistics New Zealand Symbol: C = Confidential

2. The future for horticulture in New Zealand

With New Zealand's increasing population, domestic food supply is an issue that HortNZ is concerned about nationally. HortNZ have recently released a report on domestic vegetable production in New Zealand to help educate and inform New Zealanders of this issue[2].

There is a general assumption that New Zealand is the land of plenty and we will always have enough locally-grown food to feed our population, supplemented by imported food where there is demand.

But things are changing fast. Prime fruit and vegetable growing land is being squeezed by rapid growth in towns and cities and high demand for new housing. When supply is short and demand high, prices are subject to wide variations. This can potentially put healthy food out of some peoples reach. We need to look closely at our domestic food supply and be sure that planning decisions are seen in the context of impacting the whole of New Zealand's food supply.

HortNZ have made projections around annual food volumes available for consumption in New Zealand. With New Zealand's population expecting to reach 5,045,000 by 2020 (based on annual growth between 1.5-2%), domestic food supply will not be able to sustain our future population consumption needs. This highlights the importance of food security, land production and future-proofing the availability of resources to supply our growing population.

Production of quality fresh produce requires access to versatile rural production land. There are a number of factors that contribute to versatile land including soil quality, access to water, access to transport linkages, labour and markets and an enabling regulatory framework.

Horticultural production within the Waikato Region contributes to the food supply for local communities and also nationally. It has a unique supply of land classed Land Use Capability (LUC) 1 – 3. And it is strategically located to growing markets and key export ports in Bay of Plenty and Auckland.

The supply and use of land suitable for quality horticultural production is under pressure from urban development. Particularly in Auckland, land fragmentation and reverse sensitivity issues are inhibiting horticultural operations. Accordingly, the Waikato Region has an opportunity to provide the area necessary to continue production to meet current and future food demand.

[2] http://www.hortnz.co.nz/assets/Media-Release-Photos/HortNZ-Report-Final-A4-Single-Pages.pdf

SCHEDULE TWO: SUBMISSION

Introduction to this submission

3. Variation 1 to PC1 reintroduces the withdrawn area subject to Pare Hauraki Iwi 1st Schedule notification. It also makes changes to the wider PC1 to align dates to have regard for the time taken to undertake consultation and to reintroduce the withdrawn part.

4. The view of this submitter is that there is no limitation on scope for this submission to PC1. Noting this point, the submission is not significantly different to the initial submission on PC1 although some changes are made. In general, this submission:

    a. restates the initial PC1 submission to ensure it applies to the whole catchment in terms of jurisdiction

    b. amends the tracked changes to replace the previous submission due to errors in the strikethrough. These errors resulted from technical formatting issues

    c. seeks an amendment to Rule 3.11.5.1 to allow for low intensity enterprises that are not provided for currently

    d. seeks changes to the rule for catchment collectives to be better enabled. This is in response to the many submissions on PC1 that have called for such an approach to be available

    e. outlines concerns associated with implementing the Plan

    f. identifies a Discretionary Activity status as a possible alternative for new horticulture activities and catchment collectives - while acknowledging that a Restricted Discretionary Activity approach is still HortNZ's preference. This alternative responds to the Section 32 report declining relief proposed by Par Hauraki iwi in respect to Variation 1.

    g. responds to many of the submitters calling for a LUC or natural capital approach by seeking a set of Land Use Capability (LUC) limits that would enable vegetable cropping in current locales. This will ensure there is scope to insert limits should the PC1 process determine an allocation approach based on natural capital is appropriate.

    h. notes that Central Government's recent direction to investigate a National Policy Statement (NPS) on Versatile Land and High Class Soil recognises the vegetable cropping sector is a critical part of New Zealand's food chain.

    i. Amends the dates in our submission on PC1 to line up with the date changes proposed in Variation 1 to PC1.

Initial submission on PC1

5. The initial submission on PC1 by HortNZ has been restated and is attached to this submission. As a result of the renotification of the withdrawn area some submission points are no longer valid, particularly in relation to the withdrawn area. These are discussed in paras 4.1 to 4.7 of that submission.

6. The decisions sought that are withdrawn from the initial submission are outlined in paras 4.4 and 4.5 of that submission.

7. The remaining two decisions sought in paras 4.6 and 4.7 still stand to ensure that:
    a. submissions and evidence can be provided in a coordinated manner on Variation 1 and PC1
    b. the relevant consequential changes required from the withdrawal of PC1 are still sought.

Decision Sought

8. Apply the initial PC1 submission (attached as APPENDIX 1) from HortNZ to the whole catchment. This includes the reinstated part of the catchment withdrawn and re-notified as Variation 1.

9. A strikethrough version of the plan is provided as APPENDIX 2.
    - The relief sought as a result of our initial submission is provided in red strikethrough for deletions proposed and red underlining for additions requested.
    - The relief sought as a result of the notification of Variation 1 has been provided in orange strikethrough for deletions proposed and green underlining for additions requested.

10. For avoidance of doubt; the strikethrough attached as APPENDIX 2 is the relief sought by Horticulture NZ to both PC1 and Variation 1 to PC1.

Amendments to the rule structure for low intensity enterprises

11. Rule 3.11.5.1 does not adequately provide for low intensity enterprises as a permitted activity.

12. Some farming activities exist as enterprises operating across multiple properties but that operate in a manner otherwise consistent with a low intensity farming system. Clause 4 and Clause 7 of the Rule prevent these activities being considered as permitted.

13. HortNZ consider it is fair to consider the enterprise as a whole and if all activities meet the definition of a low intensity farming system, they should be provided for under the rule as an enterprise.

Decision Sought

14. Amend the rules and make any consequential changes required to provide for enterprises that can be defined as low intensity enterprises as a permitted activity. Specifically, this is to provide for fruit production assessed as a low intensity farming activity.

Sub catchment collectives

15. HortNZ sought many changes to PC1 to provide for a sub catchment-based approach as an alternative pathway for meeting the Objectives of PC1. To clarify the approach sought, a summary is attached to this submission as APPENDIX 3. Consequential changes to the initial submission are incorporated in the APPENDIX 2 strikethrough.

Decision Sought

16. Provide for a subcatchment collective in a manner consistent with the approach set out in the attached APPENDIX 3.

17. Provide relief in relation to allowing for a subcatchment approach in a manner consistent with the changes sought in APPENDIX 2 to Policy 9(d)(a) as well as changes sought in the initial submission on PC1.

Plan implementation

18. HortNZ has engaged with Council staff on the implementation structure of PC1. Following this, a number of recommendations are proposed to assist improvements to PC1 implementation.

19. Key issues revolve around managing the provision of information across multiple properties under crop rotation. This particularly relates to the use of existing Industry Schemes, such as NZGAP. These issues are outlined below and discussed further in APPENDIX 4. For the avoidance of doubt, HortNZ still seeks existing commercial vegetable cropping to be regulated as a controlled activity.

20. Key issues on the proposed implementation process as notified in the variation to PC1:

    a. The current interpretation of the Certified Industry Scheme (CIS) does not provide for acceptance of GAP schemes. The interpretation of CIS is an extension-based approach rather than the independently audited assurance framework in which NZGAP certified businesses operate.
    b. The CIS principles do not acknowledge the credibility of the GAP assurance framework with third party audits and JAS-ANZ accreditation of Certification Bodies who audit GAP certified businesses.
    c. Current requirements on data collection and reporting to WRC are onerous and focused on process rather than outcomes. Appendix 4 includes correspondence between HortNZ and council outlining concerns relating to the various implementation documents that have been circulated for comment.

Decision Sought

21. Provide relief in relation to plan implementation that addresses the problems identified above in a manner consistent with the changes sought in APPENDIX 2.

Review of activity status sought for Rules sought in the PC1 submission by HortNZ

22. HortNZ sought new restricted discretionary rules for catchment collectives and new commercial vegetable cropping in submissions to PC1. Providing for these activities through a Restricted Activity pathway remains HortNZ's preference.

23. However, having reviewed the Section 32 report in relation to Variation 1, should a Restricted Discretionary approach not be deemed appropriate, HortNZ seeks jurisdiction be provided for these activities as full Discretionary rules. This will ensure that all the policies and objectives of the plan can be considered in determining an application under these proposed rules.

Decision Sought

24. To provide for the activities proposed in the initial submission as Restricted Discretionary activities (changes to Rule 3.11.5.6 outlined in para 9.10; new RDA Rule 3.11.5.X sought in para 9.12)

25. Should it be deemed inappropriate to undertake the decision in para 26 of this submission, HortNZ seeks these activities be provided for as Discretionary activities.

Natural capital-based approaches to allocation of nitrogen

26. In the initial submission, HortNZ opposes the use of nitrogen as a proxy for intensification and a tool to allocate discharges. Farmers should be considering how they manage their responsibility for contaminant discharges, as opposed to seeking the allocation of discharge rights in the years to 2026. This approach is more likely to result in behaviour change and be more efficient in achieving PC1 objectives.

27. It is our view that the full implications of an allocation system, based on a nitrogen reference point with a poorly defined set of rights and entitlements, is not desirable. It is likely to result in a freeze on crop rotation. This will completely halt food production and cripple the horticultural industry.

28. In the Horizons process the Court determined a LUC based allocation that could not be achieved by commercial vegetable cropping enterprises based on pastoral land use based research. The result is a complete freeze on rotation and consent application for new vegetable production. Similarly, the allocation of nitrogen in Canterbury is having a "chilling effect" on the ability to lease new land for rotation.

29. Crop rotation is a critical practice for most vegetable production. It is part of an integrated approach for pest and disease control by preventing build up of disease and helps maintain soil health[3]. A freeze on crop rotation is a freeze on vegetable production. This is likely to have significant impacts on domestic food supply. Horticultural activity in the Waikato Region supports not only local demand, but a significant portion of Auckland's food supply as well as contributions nationally.

[3] Appendix 5 provides a snapshot of a typical crop rotation over a four-year period as an example.

30. It is noted that many submissions are calling for a natural capital or LUC based approach to allocating nitrogen. HortNZ prefers an approach to assessing intensification based on all four key contaminants. However, should nitrogen be set as a proxy for intensification and a natural capital-based approach be provided for in the Schedule 1 process, it is important that commercial vegetable production be provided for to enable national food supply demands to be met.

31. It should be noted that the scale and location of commercial vegetable production does not present a significant obstacle to achieving the Objectives of PC1. If LUC is considered an appropriate system for allocation in decisions on PC1, HortNZ preference is that versatile land and high class soils are recognised with an allocation that provides for commercial vegetable production.

Decisions Sought

32. Ensure PC1 implements a multi-contaminant approach to assessing intensification, based on the risk of Nitrogen, Phosphorus, Bacteria and Sediment discharging to water from land.

33. Ensure that PC1 does not implement an allocation system based on Nitrogen only as a proxy for intensification.

34. Should Nitrogen be determined as a proxy for intensification and a natural capital approach be adopted, provide for commercial vegetable production in the allocation of Nitrogen in a manner that ensures rotation is not compromised and that is consistent with the intent of the paragraphs above.

Proposed NPS for Versatile Land and High Class Soils

35. HortNZ is aware that Government has recently initiated investigation on an NPS for Versatile Land and High Class Soils. HortNZ supports the development of a new NPS to recognise the damaging loss of commercial vegetable production land as a result of urban encroachment.

36. However, the NPS is unlikely to provide relief in a timely matter. Auckland has already lost to development, 14% of LUC 1 class land, 31% of LUC 2 class land and 18% of LUC 3 class land[4]. Once developed, this land is lost to rural production indefinitely. Other flow on effects of urban development is the sterilisation of remaining versatile land, namely through reverse sensitivity and reduced access to high quality water. The proposed NPS is unlikely to address the loss of land that has already been realised within the Auckland region.

37. The loss of versatile land in the Auckland region means that additional capacity for commercial vegetable production must be sought within the catchment of the Waikato River. Therefore, there are no changes to the changes sought in our initial submission on PC1 seeking to provide for some limited additional opportunities to convert land to commercial vegetable production.

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[4] Fiona Curran-Cournane, Nancy Golubiewski & Laura Buckthought (2018): *The odds appear stacked against versatile land: can we change them?*; New Zealand Journal of Agricultural Research DOI: 10.1080/00288233.2018.1430590

Decision Sought

38. Grant relief providing an option to convert land to commercial vegetable production in a manner consistent with the initial submission of PC1 by HortNZ.

APPENDIX 1: HortNZ's initial submission to PC1

COMMENTS ON PROPOSED WAIKATO REGIONAL PLAN CHANGE 1 WAIKATO AND WAIPA RIVER CATCHMENTS

TO: Waikato Regional Council

COMMENTS ON: Proposed Waikato Regional Plan Change 1 Waikato and Waipa River Catchments

NAME: Horticulture New Zealand (HortNZ)

ADDRESS: PO Box 10 232
WELLINGTON

1. HortNZ's submission, and the decisions sought, are detailed in the attached schedules:

1.1. HortNZ wishes to be heard in support of this submission.

1.2. This submission is supported by a technical report that is to be read in support of this submission. The report has been lodged with the Waikato Regional Council via FTP file Transfer and is titled "Values and Current Allocation of Responsibility For Discharges" Jacobs Technical Report in Support of the Horticulture NZ Submission on Healthy River Plan Change".

1.3. The Plan and this submission cover a wide range of issues and there are potential consequential amendments that will be required to give effect to the relief sought in this submission.

Decision sought:

1.4. Other changes or consequential amendments as are necessary to give effect to the matters raised in this submission.

2. Background to HortNZ and its RMA involvement:

2.1. Horticulture New Zealand (HortNZ) was established on 1 December 2005, combining the New Zealand Vegetable and Potato Growers' and New Zealand Fruitgrowers' and New Zealand Berryfruit Growers' Federations.

2.2. On behalf of its 5,500 active grower members HortNZ takes a detailed involvement in resource management planning processes as part of its National Environmental Policies. HortNZ works to raise growers' awareness of the RMA to ensure effective grower involvement under the Act, whether in the planning process or through resource consent applications. The principles that HortNZ considers in assessing the implementation of the Resource Management Act 1991 (RMA) include:

- The effects based purpose of the Resource Management Act;

- Non-regulatory methods should be employed by councils;
- Regulation should impact fairly on the whole community, make sense in practice, and be developed in full consultation with those affected by it;
- Early consultation of land users in plan preparation; and
- Ensuring that RMA plans work in the growers' interests both in an environmental and sustainable economic production sense.

2.3. HortNZ works to raise growers' awareness of the RMA to ensure effective grower involvement under the Act, whether in the planning process or through resource consent applications.

Angela Halliday
Manager – Natural Resources and Environment
HortNZ

Dated: 8 March 2017

Address for service:

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3. Description of Horticulture in the Waikato Catchment as it relates to PC1

Background

3.1. The Commercial Vegetable Production sector has evolved considerably over the last three decades. Before that it was characterised by there being a plethora of relatively small scale businesses producing a wide range of summer and winter leafy greens, root vegetables and other crops which were basically sent into the auction market on the day of harvest and sold for whatever the price was on the day. These businesses were predominantly run and staffed by family members.

3.2. As the supermarkets gained dominance in the local market they started to demand year-round supply of high quality produce which they found increasingly difficult to source from the auction market. Sourcing it directly from the producers was restricted by the relatively large number of producers so they progressively set about forming relationships with growers who they knew and trusted to supply them with the quality and quantity of produce which they required.

3.3. A number of the entrepreneurial growers very quickly recognised that there was more profit to be made post production so they moved further up the value chain to take control of the processing, packaging, storage and marketing of their produce to both the local and export markets.

3.4. The Commercial Vegetable Production sector has now evolved to the point where there are approximately 10 producers who make up approximately 90% of production by volume and planted area. They are managed by family members but by far the greatest majority of staff is employed. There are still smaller family owned businesses that operate as well, but there is significant consolidation that is evident.

The nature of their businesses.

3.5. The Commercial Vegetable Production businesses are characterised by being individually very large businesses that incorporate the full range of activity from growing through to marketing of their produce. They are fully integrated. This has involved very significant investment in land, infrastructure, growing and harvesting plant and machinery, processing sites and equipment, storage sites and equipment and such ancillary services as freighting capability etc.

3.6. As part of this development they have also developed considerable intellectual property across the full range of production, processing and marketing of their produce.

3.7. Because of both the local and international markets requirements for very consistent quality and year-round supply they have had to expand the area that they can grow the crop in across New Zealand and internationally. All of this activity is based around the major processing centres based in either the Auckland or Waikato Regions because that is the closest to the major local market and export centre. It also offers them easy access to a ready available source of labour.

The nature of the land required.

3.8. The type of soil which they prefer to grow the crops in are deep, free draining soils. These soils are relatively limited in abundance across the Auckland and Waikato Regions.

3.9. There is an extensive range of crops which they grow; some which are very frost sensitive; some which require considerable winter chilling. Some crops can be grown continuously in the same land; some of which requires considerable periods before it can be grown in the same ground again to avoid disease pressure. This means that the land which is used for growing in any one year is less than the total foot print of vegetable production land. The Commercial Vegetable Production sector tends to operate at about half the land owned by the business and half which is leased both long and short term. Access to the right amount of suitable soils on a lease basis is a serious issue for this sector.

3.10. To be able to produce sufficient vegetables to meet internal demand during the winter, spring and early summer period requires that access to the suitable soils in the frost-free areas around the Pukekohe and Pukekawa hills are absolutely essential to maintain supply. This access is being threatened by urban creep from Auckland and by the lack of expansion opportunities available in the proposed Waikato PC 1.

The food access issue.

3.11. There is no doubt that the New Zealand Commercial Vegetable Production sector provides an essential service to the country by supplying vegetables to our predominantly urban population throughout the year at an affordable cost. Their ability to provide this service is predominantly driven by the availability of the correct soil types in the required climate zones which are situated in the Auckland and lower Waikato regions. The alternative source of these vegetables would involve significant transport costs internationally which would result in the price required to be paid for them to be too high for the majority of consumers.

The footprint of the sector – extracted from the accompanying technical report

3.12. In total, horticultural land occupies 0.6% of the total area of the Waikato River catchment, and accounts for 2.5% of the Total Nitrogen (TN) loads and 0.9% of the Total Phosphorous (TP) load in the overall catchment. The contribution of horticulture land to sediment loads predicted from each sub-catchment is also very low. The sediment concentrations in the Lower Waikato are influenced by the inflow of the Waipa River at Ngaruawahia, the Whangape Lake Catchment, the Opuatia catchment, and the Whangamarino River. There is also a marked increase in Chlorophyll a concentration between Huntly-Tainui and Tuakau, which is in response to the inflows from the hypertrophic riverine lakes; Lake Whangape and Lake Waikare.

3.13. There is a decreasing water clarity trend throughout the Waikato catchment which generally reflects the increasing concentrations of other constituents that influence it, including nitrogen, phosphorous, sediment and Chlorophyll a. Environmental mitigation programs on horticultural properties are very focused on ways to reduce firstly sediment and phosphorus discharges closely followed by nitrogen discharges. Furthermore, the majority of the horticultural property in the Waikato is in the Lower Waikato catchment, meaning the impact of phosphorus runoff and nitrogen leaching from horticultural enterprises covers a small proportion of the overall Waikato catchment. Horticulture also has a minimal impact on E.coli loads in the overall Waikato River catchment and contributes less E.coli yields compared with dairy, sheep and beef and urban land use.

3.14. PC1 outlines that changing landuse to commercial vegetable production is a non-complying activity. However, we think it should be provided for as a restricted

discretionary consent for new commercial vegetable production where it can be demonstrated there is an overall reduction across all four contaminants considered in PC1. The assessment of an application for new commercial vegetable production should allow recognition for any reductions in bacterial contamination as a result of the conversion of land to commercial vegetable production. And in some cases, if it can be demonstrated that the land use change results in a similar or lesser effect on core values protected by the Vision and Strategy; an increase in discharges of nitrogen should be provided for.

3.15. Horticulture may have some higher Nitrogen (N) leaching values but a very small N load overall when compared by land area covered by other activities. Policy 3 g states that '*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*."

Fruit Production

3.16. In the Waikato region the total fruit production area is approximately 1,661+ hectares. The largest fruit crops by area are kiwifruit (726ha), berryfruit (342+ha), avocados (176ha), and apples (141ha). Other fruits produced in the region include summerfruit and citrus. There is 459ha of asparagus planted in the Waikato region.

3.17. Evidence placed before many regional plan changes has demonstrated that the profile of permanent fruit cropping aligns with a definition of low intensity farming. Low intensity farming options are obviously a mitigation to higher intensity discharges within the catchment and have been enabled by PC1. HortNZ supports this approach and the regime laid out for low intensity farming.

3.18. Note: These statistics are representative of the Waikato Region, not the catchment, so the figures for the Waikato are a subset of the total amount

4. CHAPTER 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

4.1. HortNZ opposes the progression of a Plan Change 1 (PC1) without a comprehensive whole of catchment planning response.

4.2. Also, the area withdrawn from PC1 effectively divides the key growing regions of Pukekohe and Pukekawa through a north-south boundary. These growing regions need to be assessed as a whole because production is integrated across the growing region. It is already difficult as the growing region is divided by the boundary between Auckland Council and Waikato Regional Council. The horticulture sector in these regions is badly affected by conflicting regional strategies. Dividing the grower region again by withdrawing some of the area covered by PC1 makes it even harder to strategically plan for the future of the growing community.

4.3. It is the opinion of HortNZ that the withdrawal of part of the plan to address consultation with Hauraki iwi authorities results in a failure to comply with requirements of the Resource Management Act to ensure integrated management of the natural and physical resources of the region and to give effect to the National Policy Statement for Freshwater Management.

Decision sought:

4.4. Withdraw Proposed Plan Change 1 in its entirety to allow for consultation with Hauraki iwi before any further Proposed Plan Change.

4.5. Re-notify Proposed Plan Change 1 with the inclusion of the withdrawn area relating to Hauraki iwi so that the catchment can be considered in entirety and so submissions and evidence can be coordinated for the whole of the catchment.

4.6. If relief above is unable to be granted; ensure submissions and evidence for each Plan Change can be given as a coordinated package addressing the whole catchment.

4.7. Any consequential amendments necessary to address the submission as a result of any changes made to the Plan Change after the withdrawn portion has been re-notified and submissions called for.

BACKGROUND AND EXPLANATION

<u>Lack of an Issue Statement</u>

4.8. HortNZ recognises that the function of this plan change is to aid the restoration of the health and well-being of the Waikato River. The background and explanation section outlines one of the key issues; that discharges have degraded the Waikato River to the point that it is over allocated, and there is a statutory requirement to restore key values articulated by Waikato River iwi.

4.9. More regular practice is to have an issue statement that points broadly to the objectives and policies in the proposed plan. HortNZ would support the inclusion of an issue statement if it is considered desirable by decision-makers in relation to this plan. However, support would be dependent on an issue statement recognising the most

significant issues and challenges facing the grower community in relation to land and freshwater management. In this section of the submission there is text that could usefully contribute to issue statement.

Decision sought:

4.10. If an issue statement is included in this plan, provide recognition of the most significant issues and challenges facing the grower community in relation to land and freshwater management.

Collaborative Approach

4.11. HortNZ and Pukekohe Vegetable Growers Association supported a collaborative approach to resolving issues with freshwater for the Waikato River catchment. The collaborative process required significant investment in time and resources. While a collaborative process is unlikely to result in consensus; it is extremely useful for narrowing contentious issues. This is likely to aid decision-makers in a subsequent Schedule One (RMA 1991) process.

4.12. While a collaborative process can be very useful it is no substitute for a full First Schedule RMA process. A collaborative group cannot universally speak for a community on anything more than general terms. No collaborative process should fundamentally undermine individual access to justice to the full range of protections outlined in the RMA 1991.

4.13. HortNZ could not agree all of the aspects of the "CSG Approach", and this is identified in voting records for the process. But a key benefit of the process for the grower community was the opportunity provided to communicate the plan and the regulatory challenge. The final proposed plan has been delivered to an engaged grower community. The discussion held between the submitters and growers following release of the final proposed PC1 has ensured this submission is more representative of broader grower views.

4.14. There were also many aspects of freshwater quality management that were considered to be out of scope for the Collaborative Group. These included:

- management of Pest Aquatic Organisms;
- the effect on water quality management of past decisions regarding the management of water **quantity** (mainly as a result of Variation six);
- consideration of the effects of plan changes being undertaken in adjacent regions
- Consideration of the effects of contaminants other than sediment phosphorus, nitrogen and bacteria.
- Consideration of the effects of subdivision, use and development on water quality-particularly in relation to the use of rural land for greenfield residential, industrial and commercial development
- The effect on water quality of the wider suite of rules[1] enabling subdivision of rural land and the provision of drainage, roads, stormwater and sewage infrastructure.

[1] Operative Waikato Regional Plan, particularly modules 3, 4, 5 and 7.

- Consideration of who benefits from better water quality management and who should be involved in funding restoration by phasing out the overallocation of contaminants
- Opportunities to trade an allocation of contaminants to allow a highest value use as market conditions change over time.

Decision sought:

4.15. Refine statement regarding the collaborative approach to acknowledge the statements made in the above paragraphs. Acknowledge that the plan does not adequately address all sources of contaminants that impact on values identified in the Vision and Strategy.

Material plan changes prior to PC1 that occurred post adoption of the Vision and Strategy

4.16. HortNZ considers that PC1 could be improved by better consideration of prior plan changes that have influenced freshwater management. HortNZ was involved in these prior plan changes.

VARIATION 6 (Water Quantity)

4.17. HortNZ considers that has been a mistake not to consider the implications for freshwater quality management of the decisions made during Variation six back in 2009. For growers' the following aspects of those decisions are significant (with respect to water quality management).

4.17.1. Priority of access for new domestic and municipal takes of water within the primary allocable flow regime; effectively allowing a new application to over-allocate the primary allocable flow with the overallocation being subsequently phased out by decreasing other authorised abstractions after 2030. Water for irrigation of horticultural crops is one of the abstractions targeted for reductions. The most significant application has already been lodged and is in a queue waiting for consideration.[2] This consent application has the potential to reduce surface water allocation to growers by 60%. Given that discharges of nutrients can be estimated to increase without sufficient irrigation to raise yields; this will remove a key mitigation for commercial vegetable growers seeking to reduce discharges unless alternative sources of water can be found.

4.17.2. Development of a controlled activity legitimising more than 2000 unauthorised water takes for dairy shed wash down and milk cooling. This has effectively supported pastoral intensification. The controlled activity grandparents unauthorised water use for some activities, while allowing for other activities to have water allocation clawed back after 2030. Water for irrigation of commercial vegetable crops is one of the uses of water targeted for reduction as a result of grandparenting these unauthorised abstractions.

4.17.3. During variation six a secondary allocable flow that may have provided an alternative for commercial vegetable growers was removed at the request of Waikato Tainui. The secondary allocable flow was removed to provide

[2] The proposed new take for Watercare Services Ltd to meet the needs of Auckland.

more assimilative capacity to manage the effects of contaminants being discharged in the upper and mid Waikato catchments. Waikato Tainui were concerned about the effect of increased discharges as a result of conversion of land from forestry to pasture. Most of this was occurring in what is now identified as the Upper Waikato FMU. The removal of the secondary allocable flow is effectively a catchment based mitigation for discharges from land use activities higher in the catchment. This mitigation is very likely to place significant costs on the grower community in the lower Waikato.

4.17.4. The expansion of Auckland South into the Waikato is enabled by Variation 6 providing Auckland with enough domestic and municipal water supply to expand into rural areas. There will be a concurrent effect on water quality in the lower Waikato waterbodies as rural land is subdivided for a range of residential commercial and industrial purposes. The grower community has a responsibility to manage freshwater, but not to manage the effects of water quality degradation as a result of urbanisation.

Decision sought:

4.18. Acknowledge in PC 1 the effect on the grower community of water quantity decisions made in Variation 6 to the Waikato Regional Plan, and

4.19. Acknowledge that Variation 6 transferred the cost of unauthorised takes and the discharges these takes allowed; because authorisation of these takes provided for the degradation of water quality in the lower Waikato River.

4.20. Acknowledge in PC1 that the resulting clawback of water quantity allocation post 2030 will reduce access to a key mitigation of nutrient discharges.

4.21. Provide within the plan the ability for commercial vegetable growers to access water at best practice application rates to manage discharges of nutrients more effectively.

4.22. Ensure that the costs incurred by the grower community related to clawback of authorised freshwater abstractions and removal of allocation bands are factored into the section 32 analysis for PC1.

4.23. Have regard for the acknowledgements 4.18 to 4.20 by granting consequential relief contained within this submission.

<u>WAIKATO RPS (Regional Policy Statement)</u>

4.24. The Waikato RPS also enables the Vision and Strategy for the Waikato River, but goes on to recognise a number of other significant objectives including recognition of the ecosystem services (provisioning aspects) of food production. There is also strong policy recognition of the need to provide for essential industries such as the vegetable production industry. PC1 needs to reconcile the requirement to meet new water quality targets required to achieve The Vision and Strategy for the Waikato River, the need to protect key parts of the commercial vegetable sector as both an ecosystem service and an essential industry.

4.25. The submission is provoked by economic modelling of the effects of achieving Scenario One. Published reports utilising Prof Graeme Doole's economic model suggests a complete removal of the commercial vegetable sector within the Waikato catchment. This is an unacceptable outcome for the grower community.

4.26. The submission is also provoked by the need to preserve a flexible rotation to maintain sustainable commercial vegetable production system. The location of vegetable production changes over time. The location of discharges will change across land parcels. The plan change must provide for rotation. The past experience of HortNZ suggests the commercial vegetable production systems must be managed as an enterprise requiring consent for a total area that varies over time, but generally remains constant.

4.27. Recent developments in Horizons and Canterbury regions have shown that rotational systems are very disadvantaged by land use restriction rules. The chilling effect is most obvious in the determination that benchmarked allowance of nitrogen are fixed to the property through land use consent rules. This means the operation cannot lease new land and transfer the discharge. The formerly leased land benefits from the discharge entitlement of the cropping operation, whereas it should revert to the entitlement of the permitted activity regime. The land to be leased to replace the prior leased parcels has no entitlement. Growers are now asking HortNZ to approach Government and Councils due to the threat to rotation.

4.28. Rotation is the crux of sustainable management in arable and vegetable cropping systems. The absence of rotation raises the prevalence of unmanageable disease and does not allow for the rejuvenation or resting of soil. The removal of the options for leasing, sharing and otherwise switching land would basically cause the production system to cease.

4.29. The focus of policy controls should not be the management of land use activities; rather it should be the management of discharges to water or to land that may enter water. The rules are designed to manage discharges. The RMA function should be restricted to the management discharges to prevent unintended consequences related to notification and the consenting of multiple land-use parcels by a single grower enterprise.

4.30. There is also a greater focus within the Waikato Regional Policy Statement on 2 very significant issues in relation to PC1. These are:

4.30.1. Climate Change: The discharges of landuse activities to water should not be considered in isolation from other discharges to air. While this may not affect functional implementation of on farm practice and the management of discharges it should be a factor in considering the benefits and costs of different activities; in terms of the opportunities that are provided for those activities to be enabled.

4.30.2. High Class Soils: The preservation of the life supporting capacity derived from High Class soils is a consideration when providing for farming activities within the Waikato region.

Decision sought:

4.31. Ensure key elements of the Waikato RPS are given effect to in PC1 including the protection of ecosystem services arising from commercial vegetable production. Provide for continuance of a viable commercial vegetable production industry in the objectives, policies and methods of PC1.

4.32. Ensure existing commercial vegetable production rotations can be managed according to best practice growing principles by providing for the movement of commercial vegetable production within the Waikato River catchment.

4.33. Ensure that statutory methods within PC1 other than the noncomplying activity land use change rule are discharge controls, not section 9 RMA land use controls.

PROPOSED AUCKLAND UNITARY PLAN (PAUP)

4.34. Decisions on the PAUP will impact the availability of rural land for vegetable production in the Pukekohe region. Auckland decisions assume lost productive capacity can be replaced in North Waikato. Decisions on subdivision, use and development have the potential to impact on key groundwater resources in the lower Waikato River basin including the Kaawa aquifer.

4.35. A commercially viable vegetable sector will require some increase in Waikato vegetable production sites. The current proposed plan and section 32 analysis has not taken this into account.

Decision sought:

4.36. Recognise in the section 32 analysis for PC1 the effect of the Auckland planning regime on the availability of scarce cropping land.

4.37. Provide some opportunity for commercial vegetable production on new sites in the Waikato River catchment, to preserve the productive capacity of the vegetable sector; particularly in relation to the production of non-substitutable leafy greens, potatoes and carrots for domestic consumption in key periods of the national domestic foodchain.

4.38. These opportunities should be provided for as a restricted discretionary consent for new commercial vegetable production where it can be demonstrated there is an overall reduction across all four contaminants considered in PC1. Assessment of an application for new commercial vegetable production should allow recognition for any reductions in bacterial contamination as a result of the conversion of land to commercial vegetable production.

4.39. In some cases, if it can be demonstrated that the land use change results in a similar or lesser effect on core values protected by the Vision and Strategy; an increase in discharges of nitrogen should be provided for.

Co-management of the Waikato and Waipa Rivers

4.40. The explanation on the co-management arrangement for the Waikato and Waipa Rivers and catchments is supported.

4.41. HortNZ supports the statement that sets out how the Vision and Strategy for the Waikato River established through the three Rivers Acts is to be achieved, 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 ensuring that the management of land use and activities is closely aligned with the biophysical capabilities of the land, the spatial location, and the likely effects of discharges on the lakes, rivers and wetlands in the catchment.

4.42. 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 will take time and requires an intergenerational response. It is not reasonable or viable to load the full cost of the fix onto current occupants and resource users.

4.43. HortNZ supports the outcomes sought through PC1 and reiterates that people and communities need time to adapt to the requirements of Chapter 3.11 and supporting actions to achieve short-term objectives. Further reductions in nitrogen, phosphorus, sediment and microbial pathogen losses from land are anticipated in subsequent regional plans. The methods to support these reductions and timing to achieve the environmental outcomes will continue to require suitable timeframes and buy in from those affected.

4.44. HortNZ recognises that there are many ways to achieve the water quality outcomes sought, and the community is to be enabled to achieve water quality targets they must have the flexibility to adopt tailored local solutions. For the greatest efficiency in achieving outcomes the plan must provide for collaborative catchment based solutions involving groups of farmers working under a common entity.

4.45. HortNZ also recognises that the effect of farming activities on the values varies greatly. For example, pastoral farm conversion from forestry is a feature of development over the last 20 years. Other activities such as commercial vegetable production have remained static in the land-use footprint over that time. Gains have been made in the commercial vegetable sector by increasing efficiency; not as a result of putting more land into production.

4.46. Having said that, the footprint of the commercial vegetable sector has changed in terms of the location and the nature of rotation. This is a result of increasing pressure on the availability of land between Auckland and Hamilton. It is also a result of consolidation within the sector; because scale has been required to maintain profitability.

4.47. Pressure on land for commercial vegetable production is extremely worrying. Commercial vegetable producers require rotation for soil sustainability and disease management. A wide range of crops are produced. Each crop has a different market. While some of these markets are export focused, most of the businesses also produce the domestic market. Export crops often support domestic production and make domestic supply viable by increasing the scale and profitability of the business.

4.48. In particular Pukekohe and Pukekawa production of carrots, potatoes, and leafy fresh market greens meets domestic demand almost entirely for October, November and the early part of December. This is because of the unique set of environmental conditions

allowing for winter production. Crops from further north are restricted by disease pressure factors, and these same crops growing further south are impacted by frosts.

4.49. In this region, the domestic production element (planting for table in late winter and early spring) causes a higher - level discharge in Pukekohe and Pukekawa than in cropping systems modelled elsewhere in New Zealand.

4.50. Having said that, vegetable production produces very little bacterial contamination. Environmental mitigation programs are very focused on ways to reduce firstly sediment and phosphorus discharges closely followed by nitrogen discharges. Water efficiency has also been targeted because of the link between efficient irrigation and lower discharges from cropping systems.

4.51. There has been a noted improvement in the discharge of soil from systems in Pukekohe and Pukekawa over the last 15 years. That is because cohesive erosion and sediment control plans have been developed and implemented to preserve soil loss. On-farm systems have been integrated into public drainage management because a lack of integration was identified as a key discharge risk.

4.52. But the scientific programmes have not identified any “silver bullets” that will allow for a significant reduction in discharges of nitrogen from commercial vegetable production systems without a substantive economic loss. Growers do report that fertiliser application practices have changed significantly and this is demonstrated within literature by reviewing evidence on past application rates compare to common current application rates.

4.53. Application technology has been a significant factor in advancing position of fertiliser application. Growers are currently testing new controlled release products that have not been available to date and there is hope that these will be effective in managing nitrogen discharges.

4.54. Growers support the production of an industry assurance scheme and a farm planning regime that can be independently monitored to provide evidence of continuous improvement in practice.

4.55. OVERSEER is a management tool of significant concern to the horticulture sector. The development of the commercial vegetable cropping modules within OVERSEER has been retarded by the emphasis on pastoral production systems. Recent experience in Canterbury has demonstrated the need for an alternative modelling approach to assess the benchmark contaminant discharge from commercial vegetable cropping rotations.

4.56. It is noted that the work that was done in OVERSEER for modelling the contribution of vegetable cropping in the Waikato region[3] modelled proxy farms based on three standard rotations. The information collected to support the establishment of proxies was based on 19 surveyed enterprises representing in total as significant proportion of the cropping land in Pukekohe and Pukekawa. Other sites in the catchment were not surveyed.

[3] http://www.hortnz.co.nz/assets/Uploads/nutrient-performance-and-financial-analysis-of-lower-waikato-horticulture.pdf

4.57. A reference group was assembled under the supervision of the Ministry of Primary Industries and The Healthy Rivers Joint Venture Project. The reference group consisted of growers, agronomists, economists, government officials and scientists from Crown Research Institutes. During the process a decision was made to develop a "worst case" leaching profile to be conservative. This was represented by a significant portion of winter vegetable production within the model rotations.

4.58. The modelling of the worst case leaching profile needs to be considered when assessing the effect of the sector on discharges.

Decision sought:

4.59. Retain the statement on co-management of the Waikato and Waipa Rivers.

4.60. Ensure the plan recognises the commitment to date of growers in improving discharges of phosphorus and sediment; through the implementation of erosion and sediment control measures and adoption of more efficient irrigation systems as well as improved nitrogen application. Have regard for this by granting relief contained within this submission.

4.61. Ensure the plan provides for the establishment of an alternative method or model to establish a benchmark nitrogen and phosphorus discharge for commercial vegetable production systems from OVERSEER.

Full achievement of the Vision and Strategy will be intergenerational

4.62. HortNZ supports recognition of the intergenerational nature of change required; and recognises that the adopted 80-year timeframe to achieve the water quality objectives of the Vision and Strategy is aspirational. As stated in this section, 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. While recognising that the regional plan is a static instrument, methods (and timeframes) to achieve the water quality objectives may need to change. A;

- staged approach allowing time for the innovation (in technology and practices) is supported
- will need to be developed to meet the targets and limits in subsequent regional plans to be developed is supported.

4.63. The section could be improved by setting out the approach adopted to reducing contaminant losses for commercial vegetable production and how fruit production systems are to be managed. As proposed the section identifies the approach to reducing contaminant losses from pastoral farm land, point source and forestry activities. The proposed land use change constraint is noted but the only reference to commercial vegetable production is to Farm Environment Plans.

Decision sought:

4.64. Amend this section to:

- Recognise the essential aspects of the vegetable production industry in the Waikato.
- Identify that existing vegetable production has a priority over any new production that is likely to have a greater contribution of discharges.

- Authorised farm enterprise through a capped area controlled activity consent, allows for rotation across new and existing land parcels.
- Opportunities for new vegetable production are available if the proposed operation can demonstrate a decrease in discharges (across all four contaminants) compared to the activity it is replacing.
- Recognition of permanent fruit production as a low intensity farming activity

5. 3.11.1 VALUES AND USES FOR THE WAIKATO AND WAIPA RIVERS/NGĀ UARA ME NGĀ WHAKAMAHINGA O NGĀ AWA O WAIKATO ME WAIPĀ

5.1. HortNZ supports the identification of Primary Production as a Mana Tangata value of water arising from its use by people for economic, social, and cultural purposes.

5.2. Horticulture is a nationally significant primary production activity in the Waikato. This section sets out that the rivers support this production. HortNZ agrees with this statement but this is only part a system that requires access to land, suitable parcel sizes, climate, labour and a supportive regulatory system to enable rural production.

Decision sought:

5.3. Retain Primary Production as a Mana Tangata value.

5.4. Provide some additional text in the description of the primary production value that recognises the significant role Pukekohe and Pukekawa commercial vegetable production systems have in the national domestic food chain.

6. 3.11.2 OBJECTIVES / NGĀ WHĀINGA

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

By 2096, discharges of nitrogen, phosphorus, sediment and microbial pathogens to land and water result in achievement of the restoration and protection of the 80-year water quality attribute targets in Table 3.11-1.

6.1. The objective explanation could be improved as the objective is not to restore and protect 80-year water quality attribute targets but to restore and protect the health and wellbeing of the Waikato River.

Decision sought:

6.2. Amend as follows:

> *"By 2096, the adverse effects from discharges of nitrogen, phosphorus, sediment and microbial pathogens to land and water are reduced resulting in achievement of the desired state of intrinsic freshwater values for the Waikato River, represented by the ~~restoration and protection of the~~ 80-year water quality attribute targets in Table 3.11-1."*

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

Waikato and Waipa communities and their economy benefit from the restoration and protection of water quality in the Waikato River catchment, which enables the people and communities to continue to provide for their social, economic and cultural wellbeing.

6.3. Maintaining social, economic and cultural welling must be a cornerstone objective in PC1.The objective could also be improved by splitting the sentence to remove ambiguity.

Decision sought:

6.4. Amend Objective 2 as follows:

> *Waikato and Waipa communities and their economy benefit from the restoration and protection of water quality in the Waikato River catchment. The restoration and protection of water quality, should enables the people and communities to continue to provide for their social, economic and cultural wellbeing.*

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

Actions put in place and implemented by 2026 to reduce discharges of nitrogen, phosphorus, sediment and microbial pathogens, are sufficient to achieve 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

6.5. It is agreed that a 10% reduction should be sought overall. HortNZ has commissioned work to ensure that the targeted reductions required for vegetable growing are fair given:

- the impact of the sector on water quality values and the likely cost to the community of achieving the targets.
- The impact of prior regulatory decisions on the ability to mitigate contaminant loss.
- The wider benefits of commercial vegetable production to the New Zealand community.
- Prior work undertaken by growers within the commercial vegetable sector who have reduced the contaminant discharge footprint; particularly in relation to sediment and phosphorus discharges.

6.6. HortNZ also recognises the benefit of providing flexibility to land managers seeking to achieve reductions collaboratively at a catchment or sub-catchment scale. It is acknowledged also that the reductions required in the immediate 10 years may not reflect in the short-term water quality attribute targets (Table 3.11 – 1) being met, due to lags or delays in contaminant delivery to water through or over land. It is recommended that contaminant load targets for sub-catchments are also provided in a new table.

Decision sought:

6.7. Amend the objective in the following way:

> "*Actions put in place and implemented by 2026 to reduce discharges of nitrogen, phosphorus, sediment and microbial pathogens, are sufficient to achieve 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 <u>or achievement of the contaminant load reduction targets specified for each subcatchment in Schedule 1C Table XX[4].</u>"*

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

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

a. considering the values and uses when taking action to achieve the attribute targets for the Waikato and Waipa Rivers in Table 3.11-1; and

[4] *For the purpose of this relief HortNZ has produced a 10 year Subcatchment Load Target Table (**Schedule 1C Table XX**) and attached it to proposed relief as part of new Schedule 1C below. As an alternative where it is mentioned in this submission it could be inserted as a new part of Table 3-11-1*

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.*

6.8. The proposed plan change is not allocating discharge rights. However, the proposed plan is managing the discharges from activities by managing the land use. The land use change consent regime proposed is not a land use consent regime but a discharge consent regime. The ten - year timeframe to develop tools and methods for property level allocation is required. The lack of appropriate accounting frameworks suitable for property level allocation is a significant barrier to accurately measuring success in achieving target contaminant reductions.

6.9. There should be policies and methods supported by an objective to encourage communities who choose to develop more accurate accounting frameworks at the subcatchment scale to manage contaminant reductions collectively.

6.10. The transitional nature of this plan should be identified in this objective. Many elements of the community are reluctant to set an approach for allocating contaminant discharges in stone without far more careful consideration of the options for allocating contaminant discharge responsibilities. HortNZ considers that the current approach of grandparenting discharges is suboptimal but necessary. It is necessary because of the lack of detailed information available at the time of this plan change.

6.11. Following 10 years of information collection the community will be better informed to make long-term decisions about the allocation of discharge rights.

Decision sought:

6.12. Retain the staged approach but add two new aspects to the objective:

> *A **staged** approach to change enables people and communities to undertake adaptive management to continue to provide for their social, economic and cultural wellbeing in the short term while:*
>
> *a. considering the values and uses when taking action to achieve the attribute targets for the Waikato and Waipa Rivers in Table 3.11-1 or achievement of the contaminant load reduction targets specified for each subcatchment in Schedule 1C Table XX; 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 and*
>
> *c. recognising that this plan change is transitional, to provide time to develop the tools required to more efficiently allocate responsibility for achieving contaminant reduction targets in the long-term.*
>
> *d. enabling the production of contaminant accounting frameworks that support robust measurement of progress to achieving the long-term and short-term target states for attributes and subcatchment load limits by more accurately identifying property level responsibilities for contaminant reduction.*

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

Decision sought:

6.13. Retain this objective as notified.

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

Decision sought:

6.14. Retain this objective as notified.

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 for water quality consistent with the Vision and Strategy. Objective 1 sets aspirational 80-year water quality targets, which result in improvements in water quality from the current state monitored in 2010-2014. The water quality attributes 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.

6.15. The "reasons" for Objective 1 should be amended to ensure that a proposed new subcatchment load limit table is incorporated.

6.16. Make consequential methods to the Objectives, policies and rules as required to support this relief.

Decision sought:

6.17. Amend Reasons for Adopting Objective 1 as follows:

> *Objective 1 sets long term limits for water quality consistent with the Vision and Strategy. Objective 1 sets aspirational 80-year water quality targets, which result in improvements in water quality from the current state monitored in 2010-2014. The water quality attributes listed in Table 3.11-1 (and / or the contaminant load reduction targets specified for each subcatchment in Schedule 1C Table XX) 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. There is benefit in providing flexibility to land managers seeking to achieve reductions collaboratively at a catchment or subcatchment scale. Contaminant load targets are therefore set for subcatchments to support achieving the Vision and Strategy.*

Reasons for Adopting Objective 2

6.18. 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 target may require a potentially significant departure from how businesses and communities currently function, and it is important to minimise social disruption during this transition.

6.19. The “reason” supporting Objective 2 is important and would be improved by noting that it is important to minimise the ‘economic’ and social disruption to the community during the transition to achieving water quality targets.

Decision sought:

6.20. Amend Reasons for Adopting Objective 2 as follows:

> *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 target may require a potentially significant departure from how businesses and communities currently function, and it is important to minimise economic and social disruption during this transition.*

Reasons for adopting Objective 3

6.21. 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.

6.22. 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.

6.23. 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.

6.24. A consequential amendment to the reasons for Objective 3 is required to insertion a new subcatchment load limit table. The reasons would also be improved by the insertion of new text encouraging collaborative approaches to managing discharges at the subcatchment enterprise scale.

Decision sought:

6.25. Amend Reasons for Adopting Objective 3 as follows:

> *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. A range of actions will be promoted including collaborative approaches to managing discharges at a subcatchment scale to achieve subcatchment load limits.*
>
> *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~~ giving effect to the targets and limits set in Objective 1.*

Reasons for adopting Objective 4

6.26. 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 must ensure that overall costs to people can be sustained.

6.27. 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.

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

6.29. The reasons supporting Objective 4 is important and would be improved by noting that it is important to minimise the 'economic' and social disruption to the community during the transition to achieving water quality targets.

Decision sought:

6.30. Amend Reasons for Adopting Objective 4 as follows:

> *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 must ensure that overall costs to people can be sustained.*
>
> *In the future, a property-level allocation of contaminant discharges may be required. Chapter 3.11 sets out the framework for collecting the required information so that the most appropriate approach can be identified. Land use type or intensity at July 2016 will not be the basis for any future allocation of property-level contaminant discharges. Therefore, consideration is needed of how to manage impacts in the transition.*
>
> *Objective 4 seeks to minimise <u>economic and</u> social disruption in the short term, while encouraging preparation for possible future requirements.*

6.31. Add a statement to the reasons as follows:

> *<u>The consenting regime will manage the discharges from activities by managing the use. The regime is, therefore, a discharge consent regime under section 15 RMA not a land use consent regime under section 9 RMA.</u>*

7. 3.11.3 POLICIES/NGĀ KAUPAPA HERE

Policy 1: Manage diffuse discharges 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 poto

Manage and require reductions in sub-catchment-wide discharges of nitrogen, phosphorus, sediment and microbial pathogens, by:

a. Enabling activities with a low level of contaminant discharge to water bodies provided those discharges do not increase; and
b. Requiring farming activities with moderate to high levels of contaminant discharge to water bodies to reduce their discharges; and
c. Progressively excluding cattle, horses, deer and pigs from rivers, streams, drains, wetlands and lakes.

7.1. HortNZ supports recognition and enablement of low intensity farming systems. This is particularly important for the fruit production sector. Typical fruit production systems in the Waikato grow kiwifruit, berry fruit and apples. Scientific data on contaminant discharges in fruit production systems demonstrates a low environmental risk. If contaminant discharge levels are to be reduced across the catchment there should be no impediment to the establishment of new low discharge primary production.

7.2. The regional plan must continue to recognise permanent fruit production as a low intensity farming activity that is entitled to expand without excessive limitations through the ten-year transitional period. HortNZ supports the minimum requirements for registration and reporting on low intensity farming systems and that they remain a permitted activity.

7.3. Given that this policy speaks to the management of subcatchment wide discharges, it is an appropriate place to enable the collaborative management of discharges at a scale greater than a single farm. Farmer / catchment collectives managing discharges as a single enterprise within a subcatchment or a water management unit are very likely to achieve environmental outcomes in a more coordinated and effective way.

7.4. It is accepted that farming activities with moderate to high levels of contaminant discharge to waterbodies should reduce the effect of those discharges. However, there is no provision in the plan to offset the effects of diffuse discharges by providing mitigations beyond the farm boundary. Proposed Policy 3.11.3-1 should be modified to provide for offsetting where it can be demonstrated there will be a commensurate effect on the restoration of the health and well-being of the Waikato River.

7.5. The policy should enable a consenting pathway for groups that form to take responsibility for contaminant reductions by implementing a combination of catchment and paddock scale mitigations that are able to be measured and reported.

7.6. In order to assess the ability of the farmer/catchment collective to achieve reduction targets at the time of resource consent application; will be necessary to provide the Council with a creditable natural resource accounting framework. The framework must be able to model the likely effectiveness of a suite of discharge mitigations.

7.7. For a decision to be made by the council any lodged proposal would need to be assessed against catchment load targets and/or instream concentration targets

specified within the plan. This is a key reason for HortNZ to seek the insertion into this plan of a schedule listing 10-year load targets for each contaminant by subcatchment. Changes sought to this policy proposed to be supported by some consequential changes to methods. These are also outlined in the submission.

Decision sought:

7.8. Modify policy 3.11.3.1 to achieve the intent of revised policy below;

Manage and require reductions in sub-catchment-wide discharges of nitrogen, phosphorus, sediment and microbial pathogens, by:

a. Enabling activities with a low level of contaminant discharge to water bodies provided those discharges do not increase; and

b. Requiring farming activities with moderate to high levels of contaminant discharge to water bodies to reduce <u>the effect of</u> their <u>discharges through on-farm and / or off-farm actions;</u>

<u>ba. Enabling collective action at a catchment scale by groups seeking to manage discharges as a single entity; and</u>

<u>bb Providing criteria for the approval of natural resource accounting systems used to enable catchment or sub catchment based approaches;</u>

<u>bc Providing a table of ten-year sub catchment load targets for the four contaminants (Schedule 1C Table XX),</u>

c. Progressively excluding cattle, horses, deer and pigs from rivers, streams, drains, wetlands and lakes.

Policy 2: 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

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

a. Taking a tailored, risk based approach to define mitigation actions on the land that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens, with the mitigation actions to be specified in a Farm Environment Plan either associated with a resource consent, or in specific requirements established by participation in a Certified Industry Scheme; and

b. Requiring the same level of rigour in developing, monitoring and auditing of mitigation actions on the land that is set out in a Farm Environment Plan, whether it is established with a resource consent or through Certified Industry Schemes; and

c. Establishing a Nitrogen Reference Point for the property or enterprise; and

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

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.

7.9. HortNZ supports a policy platform that provides for a Farm Environment Plan approach established by resource consent or certified industry schemes. The focus on providing a nitrogen reference point appears unbalanced, however.

7.10. Nitrogen is one of the four contaminants that are a focus of this plan. All four contaminants affect the values. The effect of each contaminant discharge on the values differs depending on the location and character of the discharge.

7.11. The introduction of a nitrogen reference point places an unhealthy emphasis on one contaminant. HortNZ has concerns that this emphasis may have the following adverse consequences:

- It may adversely affect the community's ability to establish a new allocation framework in ten years' time.
- It does not provide for a tailored / spatial approach to managing discharges across the contaminants depending on the location of the activity and the effect of the activity on the values.

7.12. There are significant problems relating to the measurement or modelling of a nitrogen reference point. Dealing with these problems within the planning framework has de-emphasised the importance of managing other contaminants within the planning framework.

7.13. HortNZ recognises there has to be a way of measuring change from the status quo to make sure there is not a continuance of the increases in discharges seen over time. But estimation of the discharges of one contaminant should not be a proxy for measuring an increase or a decrease in the other discharges.

7.14. The last 20 years of good management practice within the commercial vegetable sector has focused on reduction of phosphorus and sediment from cultivated land. Significant advances have been made in the development of systems to manage and reduce the discharge of contaminants and preserve the scarce soil resource in the Pukekohe and Pukekawa districts.

7.15. Subsurface drainage and percolation of water through soil as opposed to across land is a key mitigation. Increased focus on nitrogen may be to the detriment of these mitigations. It is the view of HortNZ that a balanced approach needs to be taken to contaminant reductions across all the 4 contaminants.

7.16. The nitrogen reference point may be useful, but it should not be required at the property level when there is a collective group seeking to manage discharges at a greater scale. There should be alternatives to the nitrogen reference point during the transitional period, where it can be demonstrated that the absence of the nitrogen reference point will not increase the overall level of discharges.

Decision sought:

7.17. Reword as proposed below:

> *Manage and require reductions in sub-catchment-wide diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens from farming activities on properties and enterprises by:*

a. *Taking a tailored, risk based approach to define mitigation actions on the land that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens, with the mitigation actions to be specified in a Farm or Enterprise Environment Plan either associated with a resource consent, or in specific requirements established by participation in a Certified Industry Scheme; and*
b. *Requiring the same level of rigour in developing, monitoring and auditing of mitigation actions on the land that is set out in a Farm or Enterprise Environment Plan, whether it is established with a resource consent or through Certified Industry Schemes; and*
c. *Establishing a Nitrogen Reference Point or proxy for ~~the~~a property or enterprise that is not part of a consented catchment collective managing a range of properties as a single group; and*
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) when assessed across all 4 contaminants, and proportionate to the scale tailored to ensure reductions are targeted at actions within the subcatchments that will improve the values of freshwater specified within this plan. Of improving values water quality improvements required in the sub-catchment; and*
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.*

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

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

a. *Flexibility is provided to undertake crop rotations on changing parcels of land for commercial vegetable production, while reducing average contaminant discharges over time; 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. *Establishing a Nitrogen Reference Point for each property or enterprise; and*
d. *A 10% decrease in the diffuse discharge of nitrogen and a tailored reduction in the diffuse discharge of phosphorus, sediment and microbial pathogens is achieved across the sector through the implementation of Best or Good Management Practices; and*
e. *Identified mitigation actions are set out and implemented within timeframes specified in either a Farm Environment Plan and associated resource consent, or in specific requirements established by participation in a Certified Industry Scheme.*
f. *Commercial vegetable production enterprises that reduce nitrogen, phosphorus, sediment and microbial pathogens are enabled; and*
g. *The degree of reduction in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens is proportionate to the amount of current discharge (those discharging more are expected to make greater reductions), and the scale of water quality improvement required in the sub-catchment.*

7.18. HortNZ supports a policy platform that provides for:

- The essential aspects of the vegetable production industry in the Waikato.
- Targeted reductions required for vegetable growing that are fair given the impact of the sector on water quality and the likely cost to the community of achieving the targets.
- Protects existing production as a priority over any new production that is likely to have a greater contribution of discharges.
- Protects the concept of an authorised farm enterprise through a capped area controlled activity consent, that allows for rotation across new and existing land parcels.
- Enables opportunities for new vegetable production through a new restricted discretionary rule if the proposed operation can demonstrate a decrease in discharges compared to the activity it is replacing. Those discharges should be assessed across all four contaminants as covered by the plan change.
- Ensures the proposed farm planning framework is practical and achievable for growers.

7.19. It is not necessary to refer to the nitrogen reference point in this policy as it is already required by policy 2.

7.20. The outcomes sought by PC1 would be further advanced by providing an offsetting mechanism for non-point source discharges.

Decision sought:

7.21. Amend Policy 3 as follows:

Manage and require reductions in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens from commercial vegetable production through a tailored, property or enterprise-specific approach <u>to consenting discharges where</u>:

a. Flexibility is provided to undertake crop rotations on changing parcels of land for commercial vegetable production, while reducing average contaminant discharges over time; and

b. The maximum area in production for a property or enterprise is established and capped utilising commercial vegetable production data <u>sourced</u> from the 10 years up to 2016; and

c. Establishing a Nitrogen Reference Point for each property or enterprise[5]; and

d. A ~~10% decrease in the diffuse discharge of nitrogen and a~~ <u>tailored reduction of no more than 5%</u> through the implementation of Best or Good Management Practices in the diffuse discharge of nitrogen, phosphorus, and sediment is achieved across the sector through the <u>while recognising:</u>

- *<u>the absent or low risk of discharges of microbial pathogens from commercial vegetable production;</u>*
- *<u>the need to preserve aspects of commercial vegetable production required to maintain domestic supply of vegetables;</u>*
- *<u>the pressure on and scarcity of land suitable for commercial vegetable production. This pressure has recently increased as a</u>*

[5] if it is considered that policy 3C should be retained HortNZ seeks changes to the wording: "*<u>Utilise proxy farm systems to approximate a nitrogen reference point in recognition that OVERSEER is unlikely to identify a nitrogen reference point for commercial vegetable production systems that is accurate enough for the purpose</u>*".

result of greenfields expansion onto versatile land in the Auckland region.

- *prior implementation of Best or Good Management Practices; and*

e. *Identified mitigation actions that 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 or a collective enterprise managing discharges as a group.*

f. *Commercial vegetable production enterprises that reduce can demonstrate an overall reduction in the combined discharges of nitrogen, phosphorus, sediment and microbial pathogens (compared to the existing activity) 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. *Consent will generally be granted for a term greater than 15 years*

i. *An offset measure may be proposed in an alternative location or locations to the non-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:*

   i. *Primary discharge does not result in any significant toxic adverse effect at the non-point source discharge location; and*

   ii. *Offset measure provides an equivalent benefit for the values of freshwater specified in this plan; and*

   iii. *Offset measure occurs preferably within the same sub-catchment in which the primary discharge occurs and if this is not practicable, then within the same Freshwater Management Unit or a Freshwater Management Unit located upstream, and*

   vi. *Offset measure remains in place for the duration of the consent and is secured by consent condition.*

Policy 4: 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 take mitigation actions that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens in order for Objective 1 to be met.

7.22. HortNZ supports a policy platform that enables existing and new low discharging activities to continue while recognising that low dischargers may in the future need to take mitigation actions to reduce contaminants.

7.23. Asparagus production differs in nature from other commercial vegetable cropping activities but is currently captured by the definition of commercial vegetable cropping.

HortNZ and the Asparagus Industry Council are of the view that the perennial nature of asparagus and the subsequently different discharges and cultivation regimes justify treatment of asparagus is an existing or new low discharging activity.

Decision sought:

7.24. Retain as proposed.

7.25. Alter the definition of commercial vegetable cropping by deleting reference to asparagus.

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

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 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.

7.26. The proposed plan change is not allocating discharge rights. The ten - year timeframe to develop tools and methods for property level allocation is required. For this reason, HortNZ seeks clarity within the plan that the discharge controls and methods are not considered to be section 9 land use controls; because it is possible that grandparenting of current discharges will prevent a more optimum allocation approach to be established following the 1st 10 years that are covered by this plan change.

7.27. Following the first 10 years of transition it may be desirable to introduce a system of land use controls that allocate discharges to parcels of land depending on the natural features of land and climate. However, making these section 9 controls in the transitional plan will severely hamper the ability to maintain rotations across shared and leased land managed by commercial vegetable growers alongside their own land. A significant feature of many commercial vegetable production enterprises is the high proportion of leased blocks within an enterprise.

7.28. During implementation of rules requiring consent for commercial vegetable production operations in high risk catchments in the Horizons region, significant impediments were identified as a result of the discharge controls being adjudged land use controls as well. Some of these impediments related to the status of affected parties to the consent application. The same issues may end up being evident here.

Decision sought:

7.29. Retain staged approach as proposed, but clarify that discharge controls are not section 9 land use rules.

7.30. Make consequential amendments to other policies and methods to give effect to the relief sought.

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.

7.31. While HortNZ supports this policy, some improvements could be made to it. While the policy relates to the noncomplying activity land use rule generally, the management purpose of the policy relates to managing discharges so there is no overall increase in the effects of those discharges.

7.32. The policy would benefit from an ability to assess the overall effect of an activity based on spatial location and discharge footprint across all 4 contaminants without restricting any individual contaminant from increasing, should an assessment demonstrate that on balance the activity has a lesser adverse effect.

7.33. HortNZ supports a clear consenting path for the approval of land use applications that can demonstrate clear and enduring decreases in overall discharges when compared to existing activities on the site.

7.34. HortNZ does not agree however that operations capable of demonstrating clear and enduring decreases in existing diffuse discharges should be required to undertake an application for a non-complying activity resource consent. They should be provided for as a restricted discretionary activity.

Decision sought:

7.35. Amend the policy in the following way:

> *"Except as provided for in Policy 16, ~~land use change~~ consent applications under Rule 3.11.5.7 that demonstrate on the balance an increase in the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens will generally not be granted.*
>
> *~~Land use change~~ Cconsent applications that demonstrate on the balance clear and enduring decreases in existing diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens will generally be granted."*

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

Prepare for further diffuse discharge reductions and any future property or enterprise-level allocation of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens that will be required by subsequent regional plans, by implementing the policies and methods in this chapter. To ensure this 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 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.

7.36. The proposed plan change is not allocating discharge rights. The ten - year timeframe to develop tools and methods for property level allocation is required and must be supported by information gathering and research to inform future allocation.

7.37. HortNZ has developed a full set of discharge allocation principles[6] and would reserve the right to promote the full set of principles in any future plan change. It is our view that principle c) is not equitable if it does not fully embrace the "polluter pays" concept. We suggest deletion of principle c) or modification of the principle to recognise the polluter pays principle.

Decision sought:

7.38. Modify the policy as follows:

> *"Prepare for further diffuse discharge reductions and any future property or enterprise-level allocation of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens that will be required by subsequent regional plans, by implementing the policies and methods in this chapter. To ensure this 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 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. And;*
> *e. Having regard for the finite nature of High Class Soils*
> *f. Incorporating the principle of "polluter pays"; meaning that when assessed across the balance of contaminant discharges to water those having the greatest effect bear a proportionally greater cost of the transition."*

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

[6] http://hortnz.co.nz/assets/Natural-Resources-Documents/HortNZ-Nutrient-Allocation-Principles-July-16.pdf

Prioritise the management of land and water resources by implementing Policies 2, 3 and 9, and in accordance with the prioritisation of areas set out in Table 3.11-2. Priority areas include:

a. Sub-catchments where there is a greater gap between the water quality targets in Objective 1 (Table 3.11-1) and current water quality; and

b. Lakes Freshwater Management Units; and

c. Whangamarino Wetland.

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

7.39. Hort NZ partially supports a sub-catchment approach that prioritises the management of land and water resources, however notes that this policy is more related to the timing of stock exclusion given that all commercial vegetable production requires consent by the same date.

7.40. While HortNZ can see some benefits in a sub- catchment approach, grower operations do not neatly fit into subcatchments. Rotations are likely to vary across subcatchments on a yearly basis. This variance is unlikely to be large but in our view the management of enterprises across a number of subcatchments should be enabled given the scarcity of the land resource available for commercial vegetable cropping and the difficulty of managing multiple consents for the discharges across each subcatchment and balancing within the current capped area for each subcatchment referred to in the consents.

Decision sought:

7.41. Retain as proposed, but add to this policy or another if more appropriate an enabling policy that allows for the management of horticultural enterprises between subcatchments to recognise there will be a minimal overall variance in proportion of vegetable cropping across all enterprises in each subcatchment at any one time.

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; and

b. Assessing the reasons for current water quality and sources of contaminant discharge, at various scales in a sub-catchment; and

c. Encouraging cost-effective mitigations where they have the biggest effect on improving water quality; and

d. Allowing, where multiple farming enterprises contribute to a mitigation, 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.

7.42. Given that this policy speaks to the management of subcatchment wide discharges, it is an appropriate place to enable the collaborative management of discharges at a

scale greater than a single farm. Farmer / catchment collectives managing discharges as a single enterprise within a subcatchment or a water management unit are very likely to achieve environmental outcomes in a more coordinated and effective way.

7.43. It is accepted that farming activities with moderate to high levels of contaminant discharge to waterbodies should reduce the effect of those discharges. However, there is no provision in the plan to offset the effects of diffuse discharges by providing mitigations beyond the farm boundary. The inclusion within this policy of the words "edge of field" makes it difficult to see how this policy can currently provide for a collaborative approach if not all mitigations are proposed to be considered. We suggest that these words are deleted from the policy.

7.44. Proposed Policy 3.11.3.9 should be modified to provide for offsetting where it can be demonstrated there will be a commensurate effect on the restoration of the health and well-being of the Waikato River.

7.45. The policy should enable a consenting pathway for groups that form to take responsibility for contaminant reductions by implementing a combination of catchment and paddock scale mitigations that are able to be measured and reported.

7.46. In order to assess the ability of the farmer/catchment collective to achieve reduction targets at the time of resource consent application; will be necessary to provide the Council with a creditable natural resource accounting framework. The framework must be able to model the likely effectiveness of a suite of discharge mitigations.

7.47. For a decision to be made by the council any lodged proposal would need to be assessed against catchment load targets and/or instream concentration targets specified within the plan. This is a key reason for HortNZ to seek the insertion into this plan of a schedule listing 10-year load targets for each contaminant by subcatchment. Changes sought to this policy proposed to be supported by some consequential changes to methods. These are also outlined in the submission.

Decision sought:

7.48. Amend Policy 9 as follows:

> **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 and catchment collective responses. 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; and*
> *b. Assessing the reasons for current water quality and sources of contaminant discharge, at various scales in a sub-catchment; and*
> *c. Encouraging cost-effective mitigations where they have the biggest effect on improving water quality; and*

da. Enable the collaborative management of discharges at a scale greater than a single farm and provide a consenting pathway for groups that form to take responsibility for contaminant reductions by implementing a combination of catchment and paddock scale mitigations that are able to be measured and reported.

d. Allowing, where multiple farming enterprises contribute to a mitigation, 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.

e. Provide for offsetting where it can be demonstrated there will be a commensurate effect on the restoration of the health and well-being of the Waikato River.

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:

a. Continued operation of regionally significant infrastructure´; and

b. Continued operation of regionally significant industry´.

Decision sought:

7.49. Ensure that the recognition in the RPS for agriculture as a regionally significant industry is given equal weight when ensuring that point source discharges are to give effect to the targets of the Vision and Strategy as outlined in Table 3-11-1.

7.50. Make consequential amendments to the proposed changes to existing objectives, policies and rules relating to point source discharges that are contained within Part D of this notified proposed Plan Change to give effect to the relief described in 7.49 of this submission above.

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 nitrogen, phosphorus, sediment or microbial pathogens to water or onto or into land in the Waikato and Waipa River catchments to adopt the Best Practicable Option to avoid or mitigate the adverse effects of the discharge, at the time a resource consent application is decided. Where it is not practicable to avoid or mitigate all adverse effects, 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 toxic adverse effect at the point source discharge location; and

b. Offset measure is for the same contaminant; and

c. Offset measure occurs preferably within the same sub-catchment in which the primary discharge occurs and if this is not practicable, then within the same Freshwater Management Unit or a Freshwater Management Unit located upstream, and

d. Offset measure remains in place for the duration of the consent and is secured by consent condition.

7.51. HortNZ supports offsetting policy and methods as a practical tool for mitigating the effects of discharges within a catchment.

7.52. The policy and method should be extended to non-point source discharges where the same environmental outcomes can be achieved.

Decision sought:

7.53. Retain as proposed.

8. 3.11.4 IMPLEMENTATION METHODS/NGĀ TIKANGA WHAKATINANA

3.11.4.1 Working with others/Te mahi tahi me ētehi atu

8.1. HortNZ supports a collaborative approach to the implementation of PC1.

Decision sought:

8.2. Retain as proposed.

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

8.3. HortNZ supports the development of an industry certification process for industry bodied as per the standards outlined in Schedule 2.

Decision sought:

8.4. Retain as proposed.

3.11.4.3 Farm Environment Plans/Ngā Mahere Taiao ā-Pāmu

8.5. HortNZ supports the use of Farm Environment Plans to assist with achieving the outcomes sought through PC1.

8.6. HortNZ also supports the development of a certification process for professionals to develop, certify and monitor Farm Environment Plans and the use of third party audits. HortNZ has considerable evidence working with other local authorities (e.g. ECAN) to enable the quality assurance scheme NZGAP to be recognised in delivering, managing and auditing grower's environmental requirements and good management practices.

Decision sought:

8.7. Retain as proposed.

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

Waikato Regional Council will work with others to develop sub-catchment scale plans (where a catchment plan does not already exist) where it has been shown to be required. Sub-catchment scale planning will:
a. Identify the causes of current water quality decline, identify cost-effective measures to bring about reductions in contaminant discharges, and coordinate the reductions required at a property, enterprise and sub-catchment scale (including recommendations for funding where there is a public benefit identified).
b. Align works and services to reduce nitrogen, phosphorus, sediment and microbial pathogen discharges including riparian management, targeted reforestation, constructed wetlands, sediment traps and sediment detention bunds.
c. Assess and determine effective and efficient placement of constructed wetlands at a sub-catchment scale to improve water quality.
d. Support research that addresses the management of wetlands, including development of techniques to monitor ecological change and forecasting evolution of wetland characteristics resulting from existing land use in the wetland catchments.

e. Integrate the regulatory requirements to fence waterways with the requirements for effective drainage scheme management.
f. Coordinate funding of mitigation work by those contributing to water quality degradation, in proportion to that contribution.
g. Utilise public funds to support edge of field mitigations where those mitigations provide significant public benefit.

8.8. Hort NZ supports a sub-catchment approach that priorities the management of land and water resources. In our view the method could be helpfully modified to include support for management of discharges by a group/catchment collective that has verified their approach through the use of approved decision support tools. The creation of accounting frameworks at the subcatchment level is a direct benefit to Waikato Regional Council because it increases the opportunity for collective management at a large-scale. It also provides data or modelling information at a far more discreet scale.

Decision sought:

8.9. Modify as proposed.

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

a. Identify the causes of current water quality decline, identify cost-effective measures to bring about reductions in contaminant discharges, and coordinate the reductions required at a property, enterprise and sub-catchment scale (including recommendations for funding where there is a public benefit identified).
b. Align works and services to reduce nitrogen, phosphorus, sediment and microbial pathogen discharges including riparian management, targeted reforestation, constructed wetlands, sediment traps and sediment detention bunds.
c. Assess and determine effective and efficient placement of constructed wetlands at a sub-catchment scale to improve water quality.
d. Support research that addresses the management of wetlands, including development of techniques to monitor ecological change and forecasting evolution of wetland characteristics resulting from existing land use in the wetland catchments.
e. Integrate the regulatory requirements to fence waterways with the requirements for effective drainage scheme management.
f. Coordinate funding of mitigation work by those contributing to water quality degradation, in proportion to that contribution.
g. Utilise public funds to support edge of field or catchment scale mitigations where those mitigations provide significant public benefit.
h. In support of method 3.11.4.7, utilise (and coordinate the management of) public funds to share the cost of constructing decision support tools meeting the criteria specified in Schedule 1C Table XX.

3.11.4.6 Funding and implementation/Te pūtea me te whakatinanatanga

8.10. Hort NZ supports the identification in the plan of Council's commitment to securing funding to implement PC1 through the annual plan and long term plan process. There

may be opportunities for collaborative actions (e.g. offsetting) where funding from a variety of sources could support effective discharge management and environmental enhancement.

Decision sought:

8.11. Retain as proposed.

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

a. Implementing processes that will support the setting of property or enterprise-level diffuse discharge limits in the future.
b. Researching:
*i. The quantum of contaminants that can be discharged at a sub-catchment and Freshwater Management Unit^ 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^.

8.12. The proposed plan change is not allocating discharge rights. The ten - year timeframe to develop tools and methods for property level allocation is required and must be supported by information gathering and research to inform future allocation.

8.13. This makes the methods on information gathering are integral to the success of the plan. The creation of accounting frameworks at the subcatchment level is a direct benefit to Waikato Regional Council because it increases the opportunity for collective management at a large-scale. It also provides data or modelling information at a far more discreet scale. But in the interests of transparency it will be important that this information is available to the public.

Decision sought:

8.14. Amend as proposed:

a. Implementing processes that will support the setting of property or enterprise-level diffuse discharge limits in the future.
b. Researching <u>and making publicly available:</u>
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^ <u>and / or subcatchment load targets identified Schedule 1C Table XX.</u>
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<u>^ and / or subcatchment load targets identified Schedule 1C Table XX.</u>
<u>c. Prior to Jan 2019, by working with the Foundation of Arable Research, Horticulture New Zealand and The Pukekohe Vegetable Growers Association to develop a proxy nitrogen reference point for enterprises managing multiple properties and crops using a model or method approved by the Chief Executive of Waikato Regional Council.</u>
.

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

8.15. The proposed plan change is not allocating discharge rights. The ten - year timeframe to develop tools and methods for property level allocation is required and must be supported by information gathering and research to inform future allocation.

Decision sought:

8.16. Retain as proposed.

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.

8.17. Urbanisation of rural land typically results in a degradation of water quality and can adversely affect those water resource rural production systems rely on. Wetlands, lakes, rivers and groundwater resources should be protected from the adverse effects of urban related subdivision and land disturbance.

8.18. To achieve this, better locational decisions must be made about where and how urban growth is provided. It is the opinion of HortNZ that this has not been the case in a recent change to the Waikato District Plan (Plan Change 16 - Tuakau Structure Plan (Stage 1) - Residential and Industrial Rezoning (Waikato Section And Franklin Section). The Future Urban Zone of Auckland and the future urban areas proposed through the Tuakau Structure Plan will be less than 2.5km apart and fall across rural production systems that are a critical part of the food supply system. It is the opinion of HortNZ that through this plan change and structure plan the Waikato District Council has chosen housing over food production when alternatives to meeting housing demand have not been fully considered and where food production opportunities will be lost forever.

8.19. In addition, a proportion of the urbanisation planned feeds into the Whakapipi and Tutuenui Stream headwaters. If the trend in water degradation continues despite grower practices and commitments being implemented, growers should not be held responsible for the degradation. The only way to prevent this is to measure, model or monitor the effects of urban discharges on water quality in places where urbanisation is occurring.

8.20. Hort NZ suggests the method should reflect the new ‘avoidance’ approach promoted in the development principles for new development specified in 6A(m) of the Waikato Regional Policy Statement:

> *“m) avoid as far as practicable adverse effects on natural hydrological characteristics and processes (including aquifer recharge and flooding*

patterns), soil stability, water quality and aquatic ecosystems including through methods such as low impact urban design and development (LIUDD);"

Decision sought:

8.21. Amend 3.11.4.9 as follows:

"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 i<u>ncluding avoiding the degradation of freshwater resources and discharge of contaminates from urban activities into the urban environment.</u>

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.

<u>c. Assess the contribution of contaminants to waterbodies from urban areas over time to ensure that urban discharges are accounted for, to allow responsibility for managing urban discharges to be allocated.</u>

<u>d. In evaluating c. above, publicly report the assessment of contributions and their assessed effect on values for freshwater identified in this plan change."</u>

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

8.22. Development of a freshwater management unit based accounting system will give effect to the NPSFM. Hort NZ has made submissions on other methods in this plan to support the development of accounting frameworks.

8.23. Given the requirement to move to property based allocation within the next 10 years, regional Council should be seeking to coordinate public and private investment in accounting frameworks. There are likely to be applications for sub- catchment accounting frameworks to be adopted as decision support tools for managing catchment discharges collectively. The regional Council should be focused on setting

up the framework that connects the subcatchments decision support tools to provide a holistic view of resource allocation within the Waikato River catchment.

Decision sought:

8.24. Amend as proposed.

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

a. Collecting information on nitrogen, phosphorus, sediment and microbial pathogen levels in the respective fresh water bodies in each Freshwater Management Unit^ 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^.

b. Using the information collected to establish the baseline data for compiling a monitoring plan and to assess progress towards achieving the Table 11-1 water quality attribute^ targets^; and

c. Using state of the environment monitoring data including biological monitoring tools such as the Macroinvertebrate Community Index to provide the basis for identifying and reporting on long-term trends; and

ca. Produce a framework model for the greater Waikato River and surrounding land using the best available data, that can be adapted to include new decision support tools at the subcatchment level.

d. An information and accounting system for the diffuse discharges from properties and enterprises that supports the management of nitrogen, phosphorus, sediment and microbial pathogens diffuse discharges at ~~a~~n subcatchment, enterprise or property scale.

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

8.25. HortNZ supports a practical monitoring and evaluation program and in particular working with industry to collate information on the functioning and success of any Certified Industry Scheme.

Decision sought:

8.26. Retain as proposed.

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

8.27. HortNZ has considerable evidence working with other local authorities (e.g. ECAN) to enable the quality assurance scheme NZGAP to be recognised in delivering, managing and auditing grower's environmental requirements and good management practices.

Decision sought:

8.28. Retain as proposed.

9. 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

9.1. Hortnz supports recognition and enablement of low intensity farming systems. This is particularly important for the fruit production sector. The regional plan must continue to recognise permanent fruit production as a low intensity farming activity that is entitled to expand without excessive limitations through the ten-year transitional period. HortNZ supports the minimum requirements for registration and reporting on low intensity farming systems and that they remain a permitted activity.

Decision sought:

9.2. Retain as proposed.

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

Rule 3.11.5.5 - Controlled 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 activity (requiring resource consent) subject to the following 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 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 enterprise that was used for commercial vegetable production during the period 1 July 2006 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

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.

Matters of Control
Waikato Regional Council reserves control over the following matters:

i. The content of the Farm Environment Plan.
ii. The maximum area of land to be used for commercial vegetable production.
iii. The actions and timeframes 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 and information provision requirements for the holder of the resource consent to demonstrate and/or monitor compliance with 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.

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.

9.3. HortNZ supports Rule 3.11.5.5 that provides a Controlled Activity non-notified consent pathway that recognises and provides for:

- The essential aspects of the vegetable production industry in the Waikato.
- Targeted reductions required for vegetable growing that are fair given the impact of the sector on water quality and the likely cost to the community of achieving the targets.
- Protection of existing production as a priority over any new production that is likely to have a greater contribution of discharges.
- Protection of the concept of an authorised farm enterprise through a capped area controlled activity consent, that allows for rotation across new and existing land parcels.
- Ensures the proposed farm planning framework is practical and achievable for growers.

Decision sought:

9.4. Amend as proposed below:

3.11.5.5 Controlled Activity Rule – <u>Discharge of contaminants from</u> existing commercial vegetable production/Te Ture mō ngā Mahi ka āta Whakahaerehia – Te whakatupu hua whenua ā-arumoni o te wā nei

The ~~use of land for commercial vegetable production and the associated~~ diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land <u>from commercial vegetable production</u> 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 activity (requiring resource consent) subject to the following 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~~:

i in conformance with Schedule B; or

ii Through use of a proxy farm system;

to approximate the nitrogen reference, is produced for the property, enterprise or catchment collective 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 areas of land, and their locations broken down by sub-catchments [refer to Table 3.11-2], that ~~were~~ <u>are</u> 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 <u>the period 1 July 2006 to 30 June 2016 ~~that~~</u> period, shall be provided to the Council; and

f. The total area of land <u>across all subcatchments grown in</u> for which consent is sought for commercial vegetable production must not exceed the maximum land area of the property or enterprise that was used for commercial vegetable production during the period 1 July 2006 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

h. A Farm Environment Plan for the property or enterprise prepared in conformance with Schedule 1<u>B</u> and approved by a Certified Farm Environment Planner (commercial vegetable crops) is provided to the Waikato Regional Council at the time the resource consent application is lodged.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i. The content of the Farm Environment Plan.

ii. The maximum area of land to be used for commercial vegetable production.

iii. The actions and timeframes 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 <u>from activities existing prior to 2016</u> do 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 and information provision requirements for the holder of the resource consent to demonstrate and/or monitor compliance with 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.

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

Advisory notes: 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.

Consents will generally be granted for a term not less than 15 years.

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.

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

9.5. HortNZ supports Rule 3.11.5.6 that provides a Restricted Discretionary Activity status and non-notification path for 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 discharges onto or into land in circumstances which may result in those contaminants entering water.

9.6. HortNZ also supports extending the rule to provide for new commercial vegetable cropping activities that can demonstrate reductions in contaminant discharge when assessed across all of the contaminants. It is unlikely that all applications would be able to demonstrate this; because many farming activities that currently exist would most probably be assessed to have a lower level of discharges than would be possible to achieve with a commercial vegetable production operation.

9.7. However, some other activities are likely to have a greater level of adverse effect than a new commercial vegetable production system would have. For example sheep and beef finishing platforms with high stocking rates, some dairy systems and potentially other mixed systems.

9.8. The effect of contaminants on the values protected by this plan change will vary depending on the subcatchment and location of the enterprise. In catchments/subcatchments where microbiological contamination is causing significant adverse effects on values, commercial vegetable production may be a mitigation that reduces the microbiological load and its concurrent effect on values.

9.9. This is why it is important for the plan to provide for spatially different assessments. It is noted that a non-complying activity application could be lodged under the notified version of PC 1, however HortNZ does not feel this provide significant enough incentive for operations that are likely to have a lower impact. Given the acknowledged significant costs involved in implementing PC 1 will be important to encourage economically viable alternatives that have a lesser footprint then existing activities. The noncomplying activity status that would be applied to any commercial vegetable production land conversion is considered too onerous. The appropriate assessment to be conducted within a restricted discretionary activity application.

Decision sought:

9.10. Amend as proposed.

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

Discharges related to the use of land for farming activities that either:

a) cannot 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)~~; or

b) is for new commercial vegetable cropping that can demonstrate a lesser effect from the contaminant discharge compared with the existing activity (when the diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens are considered together);

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.
viii. With respect to applications made under 3.11.5.6 b), the relevant clauses of policy 3[7]

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

9.11. Seek new restricted discretionary rule for a collective catchment consent to manage within a group the outcomes specified in schedules to this plan.

Decision sought:

9.12. Insert new rule as drafted below:

Rule 3.11.5.X - Restricted Discretionary Activity Rule – The management of contaminants from farming activities by a catchment collective

The management of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens onto or into land by a catchment collective 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. Achieving the contaminant load reduction targets specified for each for subcatchment in Schedule 1C Table XX
iv. The matter set out in Schedule 1C Catchment Collectives.
v. The term of the resource consent. Minimum 15 years.
vi. The monitoring, record keeping, reporting and information provision requirements for the holder of the resource consent.
vii. The time frame and circumstances under which the consent conditions may be reviewed.
viii. The matters addressed by Schedules A and C and the Nitrogen Reference Point being:
1. In conformance with Schedule B; or

2. Determined through use of proxy farm systems to approximate the nitrogen reference for the catchment collective; or

[7] All except clause b of policy 3

3. Through modelling a series of collective mitigations that are estimated sufficient to meet the load limit targets, in accordance with the criteria in schedule 1C.

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

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

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.

9.13. HortNZ opposes the non-complying activity status for land use change to commercial vegetable production. The plan should enable opportunities for new vegetable production through a new restricted discretionary rule if the proposed operation can demonstrate a decrease in discharges compared to the activity it is replacing. Those discharges should be assessed across all four contaminants as covered by the plan change.

9.14. A non-notified consent pathway exists, supported by Policy 6. As a sector HortNZ has demonstrated that conversion to commercial vegetable production can achieve the environmental outcomes sought by PC1 and a more enabling consent framework can be established.

Decision sought:

9.15. Amend Rule 3.11.5.7 as follows:

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

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 <u>that cannot be provided for through Rule 3.11.5.5, 3.11.5.6 b, or 3.11.5.X</u> ~~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.

Alternative relief:

<u>Rule 3.11.5.7 - Non-Complying Activity Rule – Land Use Change</u>

<u>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:</u>

1. *<u>Woody vegetation to farming activities; or</u>*
2. *<u>Any livestock grazing other than dairy farming to dairy farming; or</u>*
3. *<u>Arable cropping to dairy farming; or</u>*
4. *<u>Any land use to commercial vegetable production except as provided for under standard and term g. of Rule 3.11.5.5, 3.11.5.6 b, or 3.11.5.X</u>*

<u>is a non-complying activity (requiring resource consent) until 1 July 2026.</u>

<u>Notification:</u>
<u>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.</u>

10. 3.11.5 Schedules

Schedule B Nitrogen Reference Point

10.1. There are significant problems with the use of a nitrogen reference point to place a moratorium on increases of discharges and more importantly increases of adverse impacts on the values for freshwater that have been identified. The method relies on discharges of phosphorus, sediment and microbiological contaminants remaining fixed due to nitrogen remaining fixed.

10.2. HortNZ does not believe appropriate weighting has been given across the four contaminant discharges; particularly with respect to sediment loss from cultivation practices more broadly across the catchment.

10.3. Sediment and phosphorus loss from cultivated land in Pukekohe and Pukekawa have been a key focus for the sector because these contaminants create the greatest level of risk regarding discharges to waterbodies. The mitigations used to manage this risk rely on large-scale drainage networks with nested mitigations such as raised headlands, interception bunds, check dams, decanting silt traps, deep ripping, subsoil drainage and use of cover crops. It is very likely some of these mitigations increase the level of risk for nitrate leaching. But it is very hard to determine which is the better balance of mitigations across the four contaminants in relation to the site, location and resulting effect on freshwater values.

10.4. Additionally the method to calculate the nitrogen reference point is too restrictive and too focused on use of the OVERSEER tool. Practical application of OVERSEER in the commercial vegetable sector has shown its unsuitability for modelling discharges of nitrogen in complex cropping systems. As a result the sector has undertaken a large research program based on actual measurement at key reference sites within the region for discharges of soil, phosphorous and nitrogen. HortNZ is doing this collaboratively with Waikato and Auckland Regional Councils among other partners.

10.5. We have also conducted joint research with OVERSEER owners comparing a daily time step research model (APSIM[8]) with OVERSEER. APSIM is considered more likely by the science community to accurately reflect a complex rotation of vegetables, pasture, arable and cover crops. The comparison of OVERSEER and APSIM have shown significant variance between the outputs of the 2 models for vegetable cropping systems.[9]

10.6. Much is made of the desire to have consistency within the methods that compare different farming systems. This is often used as a reason for insisting on OVERSEER as a base model for the entire rural sector. The issue with this approach is that the development of OVERSEER has not been consistent across sectors due to the significant pastoral demand for research time. Some of the key problems with the use of OVERSEER have been outlined in a report that was included as part of the Section 32 for this Plan.[10]

10.7. Another option is the use of a broader based decision support tool that factors in tailored mitigations both at the property scale and the enterprise scale. This could be

[8] Agricultural Production Systems sIMulator

[9] http://hortnz.us14.list-manage1.com/track/click?u=aecda7aaa04d433b3c1267c8e&id=e2d3a6fb55&e=1472779fa4

[10] http://www.hortnz.co.nz/assets/Natural-Resources-Documents/Nitrogen-estimation-and-the-proposed-Waikato-75th-percentile-rule-for-vegetable-cropping-April-2016-002.pdf

extended to the subcatchment scale. This should be provided for as an alternative to a nitrogen reference point. It is recognised that the Council should have a default system they can apply.

10.8. The Waikato River catchment scale modelling of commercial vegetable cropping operations and the potential for mitigations has been severely retarded by the lack of ability to model the mitigations using overseer. In our view the property level nitrogen reference point established using overseer is innacurate because:

- cropping rotations occur at a greater frequency than OVERSEER is currently capable of managing
- the lack of cropping options or cultivation methods to enter; and the gross time step utilised by OVERSEER
- the difficulties of modelling overlapping cropping sequences across different blocks and properties over time.

10.9. Recently Canterbury Regional Council adopted a property level nitrogen reference point system and has attempted to implement this on vegetable cropping systems present in Canterbury. The Regional Council has recently accepted the presence of issues that need to be resolved before OVERSEER can be utilised at the property scale for commercial vegetable cropping systems.

10.10. As a result, HortNZ has been able to develop a series of proxy measurements for vegetable cropping based on highly researched rotation data processed through the Matrix of Good Management Project in Canterbury. The resulting tool is called N–Check. There are some key features to N–Check:

- It provides a range of standardised Canterbury cropping rotations to select from. It assumes a mitigation package that has been modelled closely by Crown Research Institutes.
- It models discharges at the enterprise level across a range of properties and rotated crops to take account of variance and uncertainty.
- It requires evidence that a list of specific mitigations are undertaken on the farm.
- It is a transitional tool provided by the Regional Council as an option until 2022 when the suitability of OVERSEER will be reviewed.

10.11. HortNZ supports inclusion of alternative options for establishing a nitrogen reference point. In our view the current schedule needs to be extensively modified. In a very minimum it should provide for:

- the development of a range of property or enterprise level proxies for a nitrogen reference point utilising a range of decision support tools more suited than OVERSEER for measuring complex arable and vegetable cropping systems.
- The ability to use decision support tools approved by the Council at a larger than property scale.
- Incorporation of new information about discharges from direct measurement research over the next 10 years.

Decision Sought:

10.12. Rewrite the schedule to provide options as alternatives to the use of OVERSEER for the arable and commercial vegetable sector, based on the content of the paragraphs above.

10.13. HortNZ also has a wider concern in relation to the calculation of a nitrogen reference point. Our expert advisers suggest OVERSEER should not be manipulated in the way the schedule provides for, because this may provide nitrogen reference points that are not reflective of a 30-year climate. In particular, use of a benchmarking period is problematic, and there are various other general provisions that are not required or that may hinder an accurate measurement.

Decision sought:

10.14. Revise and simplify the protocol for use of OVERSEER in the following manner

Schedule B - Nitrogen Reference Point/Te Āpitihanga 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 person who is certified as being competent to do so, with a certification being approved by the Chief Executive of the Waikato Regional Council ~~Certified Farm Nutrient Advisor~~ to determine 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 Rule 3.11.5.7 where the Nitrogen Reference Point shall be determined through the Rule 3.11.5.7 consent process.

B. The Nitrogen Reference Point shall be the highest 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 <u>in kilograms per hectare per year</u> during the reference period.

C. The Nitrogen Reference Point must be calculated using the current version of the OVERSEER® Model<u>, APSIM or SPASMO</u> (or any other model approved by the Chief Executive of the Waikato Regional Council).

D. The Nitrogen Reference Point data shall comprise the electronic output file from the OVERSEER® <u>, APSIM or SPASMO</u> (or other approved model, and where the OVERSEER Model is used, it must be calculated using the OVERSEER Best Practice Data Input Standards 2016, with the exceptions and inclusions set out in Schedule B Table 1.

E. The Nitrogen Reference Point and the Nitrogen Reference Point data must be provided to Waikato Regional Council within the period 1 September 2018 to 31 March 2019.

F. The reference period is the two financial years covering 2014/2015 and 2015/2016, except for commercial vegetable production in which case the reference period is 1 July 2006 to 30 June 2016.

G. The following records (where relevant to the land use undertaken on the property or enterprise) must be retained and ~~provided~~ <u>available for inspection by</u> ~~to~~ Waikato Regional Council at its request:

i. Stock numbers ~~as recorded in annual accounts~~ together with stock sale and purchase invoices;

ii. Dairy production data;

iii. Invoices for fertiliser applied to the land;

iv. Invoices for feed supplements sold or purchased;

v. Water use records for irrigation (to be averaged over 3 years or longer) in order to determine irrigation application rates;

vi. The representative range of ~~C~~crops grown on the land; and

vii. Horticulture crop diaries and NZGAP records.

Schedule 1 Requirements for Farm Environment Plans

10.15. Part of the issue with the current plan is the lack of focus on managing losses from cultivation practices across broader rural land than that occupied by the vegetable sector. HortNZ considers that a range of practices could be mandated across cultivated land

Decision Sought:

10.16. Split commercial vegetable cropping farm plans out into a new Schedule 1B. Add new Schedule 1C to provide for subcatchment scale solutions. Revise Schedule 1 in the following way:

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

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

The Farm Environment Plan 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. A separate schedule has been prepared for commercial vegetable cropping systems and plans prepared by catchment collectives.

This Schedule 1 applies to all farming activities other than commercial vegetable cropping systems, but it is acknowledged that some provisions will not be relevant to every farming activity.

A. Farm Environment Plans shall contain as a minimum:

1. *The property or enterprise details:*

(a) *Full name, address and contact details (including email addresses and telephone numbers) of the person responsible for the property or enterprise.*

(b) *Trading name (if applicable, where the owner is a company or other entity).*

(c) *A list of land parcels which constitute the property or enterprise:*

I. *the physical address and ownership of each parcel of land (if different from the person responsible for the property or enterprise) and any relevant farm identifiers such as the dairy supply number, Agribase identification number, valuation reference; and*

II. *the legal description of each parcel of land.*

2. *An assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens associated with the farming activities on the property, and the priority of those identified risks, having regard to sub-catchment targets in Table 3.11-1 and the priority of lakes within the sub-catchment. As a minimum, the risk assessment shall include (where relevant to the particular land use):*

(a) *A description of where and how stock shall be excluded from water bodies for stock exclusion including:*

I. *the provision of fencing and livestock crossing structures to achieve compliance with Schedule C; and*

II. *for areas with a slope exceeding 25 degrees 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 15degrees and 3 metres for land with a slope between 15 and 25 degrees;*

III. *The provision of minimum cultivation setbacks of 5 metres <u>and/or any other practicable measures considered necessary in an erosion and sediment control plan.</u>*

(c) *A description of the critical source areas from which sediment, nitrogen, phosphorus and microbial pathogens are lost, including:*

I. *the identification of intermittent waterways, overland flow paths, <u>cultivated land</u> and areas prone to flooding and ponding, and an assessment of opportunities to minimise losses from these areas through appropriate stocking policy, stock exclusion and/or measures to detain floodwaters and settle out or otherwise remove sediment, nitrogen, phosphorus and microbial pathogens (e.g. detention bunds, sediment traps, natural and constructed wetlands); and*

II. *the identification of actively eroding areas, erosion prone areas, and areas of bare soil and appropriate measures for erosion and sediment control and re-vegetation; and*

III. *an assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens from cultivated land, tracks and races and livestock crossing structures to waterways, and the identification of appropriate measures to minimise these discharges (e.g. cut-off drains, and shaping); and*

IV. *the identification of areas where effluent accumulates including yards, races, livestock crossing structures, underpasses, stock camps, and feed-out areas, and appropriate measures to minimise the risk of diffuse discharges of contaminants from these areas to groundwater or surface water; and*

V. *the identification of other 'hotspots' such as fertiliser, silage, compost, or effluent storage facilities, wash-water facilities, offal or refuse disposal pits, and feeding or stock holding areas, and the appropriate measures to minimise the risk of diffuse discharges of contaminants from these areas to groundwater or surface water.*

(d) *An assessment of appropriate land use and grazing management for specific areas on the farm in order to maintain and improve the physical and biological condition of soils and minimise the diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens to water bodies, including:*

I. *matching land use to land capability; and*

II. *identifying areas not suitable for grazing; and*

III. *stocking policy to maintain soil condition and pasture cover; and*

IV. *the appropriate location and management of winter forage crops; and*

V. *suitable management practices for strip grazing.*

(e) *A description of nutrient management practices including a nutrient budget for the farm enterprise calculated using the model OVERSEER in accordance with the OVERSEER use protocols, or using any other model or method approved by the Chief Executive Officer of Waikato Regional Council.*

(f) *A description of cultivation management, including:*

I. *The identification of slopes over 15 degrees 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 degrees 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 control and minimise sediment leaving the cultivated paddock in overland flows; and

d. maintaining appropriate buffers between cultivated areas and water bodies (minimum 5m setback).

e. A description of collected animal effluent management including how the risks associated with the operation of effluent systems will be managed to minimise contaminant discharges to groundwater or surface water.

f. A description of freshwater irrigation management including how contaminant loss arising from the irrigation system to groundwater or surface water will be minimised.

3. *A spatial risk map(s) at a scale that clearly shows:*
   - *(a) The boundaries of the property; and*
   - *(b) The locations of the ~~main~~ relevant land use~~s~~11 <u>activities</u> that occur on the property;*
   - *(c) The locations of existing and future mitigation actions to manage contaminant diffuse discharges; and*
   - *(d) Any relevant internal property boundaries that relate to risks and mitigation actions described in this plan; and*
   - *(e) The location of continually flowing rivers, streams, and drains and permanent lakes, ponds and wetlands; and*
   - *(f) The location of riparian vegetation and fences adjacent to water bodies; and*
   - *(g) The location of critical source areas for contaminants, as identified in 2 (c) above.*

4. *A description of the actions that will be undertaken in response to the risks identified in the risk assessment in 2 above (having regard to their relative priority) as well as where the mandatory time-bound actions will be undertaken, and when and to what standard they will be completed.*

5. *A description of the following:*
   - *(a) Actions, timeframes and other measures to ensure that the diffuse discharge of nitrogen from the property or enterprise, as measured by the five-year rolling average annual nitrogen loss as determined by the use of the current version of OVERSEER, does not increase beyond the property or enterprise's Nitrogen Reference Point, unless other suitable mitigations are specified; or:*
   - *(b) Where the Nitrogen Reference Point exceeds the 75th percentile nitrogen leaching value, actions, timeframes and other measures to ensure the diffuse discharge of nitrogen is reduced so that it does not exceed the 75th percentile nitrogen leaching value by 1 July 2026~~, except in the case of Rule 3.11.5.5.~~*

~~Vegetable growing minimum standards~~

[11] *For dairy farms this might be the OVERSEER locks,for drystock farms this might be Land Use Capability blocks.*

~~*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:*~~ ~~*form of fertiliser applied*~~ ~~*rate of application*~~ ~~*placement of fertiliser*~~ ~~*timing of application*~~

Schedule 1B - Requirements for Farm Environment Plans for commercial vegetable production enterprises

1. *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 (commercial vegetable production).*

2. *The construction of a farm plan does not require duplication of material within existing farm environment plans that are considered sufficient for purpose by a Certified Farm Environment Planner (commercial vegetable production).*
3. *Farm plans are not required to duplicate material provided to Waikato Regional Council for the purpose of complying with other rules in the plan.*
4. *Farm Plans will not be incorporated into consent conditions as a whole; but matters of control or discretion will include relevant actions committed to by the consent holder.*
5. *The Farm Environment Plan shall identify key risk areas for the discharge of sediment, nitrogen, phosphorus and microbial pathogens, and identify actions, and timeframes for those actions to be completed, in order to reduce the diffuse discharges of these contaminants where practicable.*

The Farm Environment Plan must clearly identify how any specified consent condition will be complied with.

***A** Farm Environment Plans shall contain as a minimum:*

1. *The name of the legal entity registered with the Waikato Regional Council.*
2. *Information provided by the Council from registration between 1 Sep 2018 and 31 March 2019.*
3. *A description of the enterprise, detailing the general rotational cropping system, properties owned, leased and otherwise farmed on over time. This will include the legal description for each parcel of land.*
4. *An assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens associated with the farming activities on the property, and the priority of those identified risks, having regard to sub-catchment targets in Table 3.11-1 and the priority of lakes within the sub-catchment. As a minimum, the risk assessment shall include:*
    a. *A risk assessment for nutrient discharges that is approved by a Certified Farm Environment Planner (commercial vegetable crops). The risk assessment should be equivalent to the process outlined in Section 4 of the Horticulture New Zealand Code of Practice for Nutrient Management Version 1.0 August 2014.*
    b. *A risk assessment for soil conservation purposes, that is approved by a Certified Farm Environment Planner (commercial vegetable crops). The risk assessment should be equivalent to the process outlined in Section 1 of the Horticulture New Zealand Erosion &*

Sediment Control Guidelines for Vegetable Production Version 1.1 June 2014.

c. *If manures are used, undertake a microbiological discharge risk assessment.*

5. *If stock are present on land managed within the enterprise, provisions of Schedule 1 relating to the farming of animals apply. If stock are present a risk assessment for stock related discharges must be undertaken.*

6. *A schedule of mitigation actions and target completion dates derived from the risk assessments undertaken in 4 and 5 above.*

7. ***Vegetable Growing Minimum Standards***

   Farm environment plans required under Rule 3.11.5.5, 3.11.5.6 b, or 3.11.5.X 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:* • *form of fertiliser applied* • *rate of application* • *placement of fertiliser* • *timing of application*
9	*Nitrogen*	*Maintain efficient irrigation to ensure yields and the export of nitrogen in crop are maximised.*

Schedule 1C - Requirements for a subcatchment scale management plan applying to Rule 3.11.5.X iv - Restricted Discretionary Activity Rule – The management of contaminants from farming activities by a catchment collective

A subcatchment scale management plan (SSMP) shall be prepared in accordance with the requirements below.

1) The (SSMP) must be approved by the Regional Council Chief Executive before an application under Rule 3.11.5.X can be granted by the Council.

2) The SSMP must meet or exceed the expected reduction in discharges to freshwater that would be achieved through completing and implementing a farm or enterprise scale farm environment plan in accordance with Schedule 1 and Schedule 1b. The achievement in reduction of discharges must be comparable when considered over all of the properties and enterprises managed by the SSMP.

3) The SSMP must be the responsibility of a legal entity that is accountable for achieving compliance with the conditions of a resource consent issued under Rule 3.11.5.X.

4) The SSMP must be supported by a decision support tool that is able to be utilised as the accounting framework for the relevant subcatchment. The decision support tool must:

    a) Calibrate discharges and hydrological flows to observed monitoring sites within the catchment. The calibration must achieve at least

achieve a “Satisfactory” criteria for a daily model with NSE – 0.6, % bias – +/- 25%[12]

and the decision support tool must be capable of continuous upgrade and improvement.

b) Be capable of integrating with other subcatchment, freshwater management unit and catchment scale accounting systems.

c) Be able to measure mitigations for microbial, sediment, nitrogen and phosphorus discharges at all scales within the domain of the decision support tool to a standard approved by peer review agent approved by the Chief Executive of the Regional Council.

d) Be made available to the Council for use in assessing compliance with the load limit targets for the relevant subcatchment listed in Schedule 1C Table XX.

5) The SSMP must clearly identify how any specified consent condition will be complied with.

6) The SSMP shall contain as a minimum:

a) The name of the legal entity registered with the Waikato Regional Council. Information provided by the Council from registration between 1 Sep 2018 and 31 March 2019.

b) A legal description of all properties and enterprises the legal entity described in Schedule 1C 3) above have legal authority to act on behalf of.

c) A description of the nature of enterprises, farms and properties and the domain of the SSMP.

d) An assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens associated with the activities within the SSMP domain, and the priority of those identified risks, having regard to sub-catchment load targets in Schedule 1C Table XX below.

e) A schedule of approved mitigation actions and target completion dates.

[12] *Based on that recommended by Moriasi et al 2007:* http://hortnz.co.nz/assets/Uploads/moriasi-et-al-2007-modeleval.pdf

Schedule 1C Table XX Estimated Subcatchment unattenuated loads for the short-term water quality targets (excluding point sources)

Site	FMU	Annual Median Chlorophyll a (mg/m3)		Annual Maximum Chlorophyll a (mg/m3)		Annual Median Total Nitrogen (mg/m3)		Annual Total Nitrogen Load t/yr	Annual Median Total Phosphorus (mg/m3)		Annual Total Phosphorus Load t/yr	Annual Median Nitrate (mg NO3-N/L)		Annual 95th percentile Nitrate (mg NO3-N/L)		Annual Nitrate Load t/yr	Annual Median Ammonia (mg NH4-N/L)		Annual Maximum Ammonia (mg NH4-N/L)		Annual Ammonia Load t/yr	95th percentile E. coli (E.coli/100mL)		Annual E.coli Load 10^15 organisms/yr	Clarity (m)	
		Short term	80 year	Short term	80 year	Short term	80 year	Short term	Short term	80 year	Short term	Short term	80 year	Short term	80 year	Short term	Short term	80 year	Short term	80 year	Short term	Short term	80 year	Short term	Short term	80 year
Upper Waikato Freshwater Management Unit																										
Waikato River at Ohaaki Br	Upper Waikato	1.5	1.5	13	13	134	134	255	10	10	18	0.039	0.039	0.062	0.062	255	0.002	0.002	0.013	0.013		70	70	1.00	3.8	3.8
Waikato River at Ohakuri Tailrace Br	Upper Waikato	3.2	3.2	11	11	206	160	554	17	17	50	0.084	0.084	0.172	0.172	555	0.003	0.003	0.017	0.017		15	15	2.16	3.4	3.4
Waikato River at Whakamaru Tailrace	Upper Waikato		5		25	260	160	364	20	20	31	0.101	0.101	0.23	0.23	364	0.003	0.003	0.01	0.01		60	60	1.39	2	3
Waikato River at Waipapa tailrace	Upper Waikato	4.1	4.1	25	25	318	160	552	25	20	48	0.164	0.164	0.32	0.32	552	0.007	0.007	0.017	0.017		162	162	2.23	2	3
Pueto Stm at Broadlands Rd Br	Upper Waikato											0.45	0.45	0.53	0.53	129	0.003	0.003	0.009	0.009		92	92	0.49	1.8	3
Torepatutahi Stm Vaile Rd Br	Upper Waikato											0.5	0.5	0.8	0.8	79	0.002	0.002	0.011	0.011		216	216	0.69		
Waiotapu Stm Homestead Rd Br	Upper Waikato											1.257	1	1.563	1.5	229	0.112	0.03	0.176	0.05		281	281	0.66		
Mangakara Stm (Reporoa) SH5	Upper Waikato											1.27	1	1.59	1.5	24	0.008	0.008	0.062	0.05		1584	540	0.07	0.9	1
Kawaunui Stm SH5 Br	Upper Waikato											2.58	2.4	2.85	1.5	32	0.006	0.006	0.079	0.05		2335	540	0.08	1.4	1.6
Waiotapu Stm Campbell Rd Br	Upper Waikato											0.915	0.915	1.1	1.1	48	0.291	0.24	0.315	0.05		18	18	0.18	1.2	1.6
Otamakokore Stm Hossack Rd	Upper Waikato											0.74	0.74	1.19	1.19	60	0.006	0.006	0.024	0.024		680	540	0.23	1.2	1.6
Whirinaki Stm Corbett Rd	Upper Waikato											0.77	0.77	0.87	0.87	10	0.002	0.002	0.012	0.012		98	98	0.06	2.7	3
Tahunaatara Stm Ohakuri Rd	Upper Waikato											0.555	0.555	0.83	0.83	204	0.003	0.003	0.015	0.015		783	540	0.69	1.3	1.6
Mangaharakeke Stm SH30 (Off jct SH1)	Upper Waikato											0.525	0.525	0.75	0.75	35	0.003	0.003	0.015	0.015		684	540	0.11	1.1	1.6
Waipapa Stm (Mokai) Tirohanga Rd Br	Upper Waikato											1.189	1	1.5	1.5	102	0.003	0.003	0.005	0.005		1147	540	0.52	1.2	1.6
Mangakino Stm Sandel Rd	Upper Waikato											0.65	0.65	0.86	0.86	222	0.003	0.003	0.012	0.012		251	251	0.77	1.8	3
Whakauru Stm SH1 Br	Upper Waikato											0.26	0.26	0.45	0.45	86	0.003	0.003	0.033	0.033		2106	540	0.23	0.8	1
Mangamingi Stm Paraonui Rd Br	Upper Waikato											2.76	2.4	3.12	1.5	113	0.091	0.03	0.296	0.05		2151	540	0.29	0.8	1
Pokaiwhenua Stm Arapuni - Putaruru Rd	Upper Waikato											1.68	1	2.04	1.5	484	0.002	0.002	0.02	0.02		1363	540	1.23	1.3	1.6
Little Waipa Stm Arapuni - Putaruru Rd	Upper Waikato											1.522	1	2.04	1.5	210	0.002	0.002	0.085	0.05		1377	540	0.69	1.5	1.6
Central Waikato Freshwater Management Unit																										
Waikato River Narrows Boat Ramp	Central Waikato	5.5	5	23	23	404	350	204	28	20	10	0.235	0.235	0.5	0.5	204	0.009	0.009	0.018	0.018		340	260	0.76	1.7	1.7
Waikato River Horotiu Br	Central Waikato	6.1	5	23	23	432	350	78	34	20	3	0.26	0.26	0.53	0.53	78	0.007	0.007	0.029	0.029		774	540	0.50	1.4	1.6
Karapiro Stm Hickey Rd Bridge	Central Waikato											0.52	0.52	1.689	1.5	94	0.008	0.008	0.031	0.031		4518	540	0.75	0.9	1
Mangawhero Stm Cambridge-Ohaupo Rd	Central Waikato											1.99	1	2.49	1.5	94	0.041	0.03	0.072	0.05		2920	540	0.30	0.3	1
Mangaonua Stm Hoeka Rd	Central Waikato											1.455	1	1.878	1.5	126	0.036	0.03	0.051	0.05		6372	540	0.44	1	1
Mangaone Stm Annebrooke Rd Br	Central Waikato											2.58	2.4	2.94	1.5	105	0.009	0.009	0.02	0.02		2052	540	0.35	0.9	1
Mangakotukutuku Stm Peacockes Rd	Central Waikato											0.8	0.8	1.788	1.5	55	0.077	0.03	0.132	0.05		11394	540	0.15	0.5	1
Waitawhiriwhiri Stm Edgecumbe Street	Central Waikato											0.88	0.88	1.24	1.24	36	0.256	0.24	0.318	0.05		5922	540	0.14	0.4	1
Kirikiriroa Stm Tauhara Dr	Central Waikato											0.815	0.815	1.572	1.5	14	0.096	0.03	0.183	0.05		2124	540	0.11	0.5	1
Lower Waikato Freshwater Management Unit																										
Waikato River Huntly-Tainui Br	Lower Waikato	5.9	5	19	19	562	350	314	43	20	9	0.365	0.365	0.9	0.9	314	0.005	0.005	0.015	0.015		1944	540	0.99	0.9	1
Waikato River Mercer Br	Lower Waikato	10	5	30	25	631	350	484	49	20	31	0.365	0.365	0.87	0.87	484	0.003	0.003	0.01	0.01		1494	540	2.82		

Waikato River Tuakau Br	Lower Waikato	11.3	5	37	25	571	350	156	50	20	9	0.325	0.325	0.88	0.88	156	0.003	0.003	0.008	0.008		1584	540	0.46	0.7	1
Komakorau Stm Henry Rd	Lower Waikato											1.279	1	4.4	3.5	414	0.25	0.24	0.419	0.4		3474	540	0.97	0.3	1
Mangawara Stm Rutherford Rd Br	Lower Waikato											0.765	0.765	2.76	1.5	695	0.103	0.03	0.172	0.05		4955	540	1.78	0.3	1
Awaroa Stm (Rotowaro) Sansons Br @ Rotowaro-Huntly Rd	Lower Waikato											0.7	0.7	1.19	1.19	35	0.021	0.021	0.089	0.05		1800	540	0.33	0.8	1
Matahuru Stm Waiterimu Road Below Confluence	Lower Waikato											0.715	0.715	1.689	1.5	113	0.016	0.016	0.059	0.05		6147	540	0.73	0.4	1
Whangape Stm Rangiriri-Glen Murray Rd	Lower Waikato											0.004	0.004	0.69	0.69	386	0.006	0.006	0.134	0.05		584	540	3.17	0.3	1
Waerenga Stm SH2 Maramarua	Lower Waikato											0.82	0.82	1.41	1.41	17	0.005	0.005	0.022	0.022		5098	540	0.18	0.9	1
Whangamarino River Jefferies Rd Br	Lower Waikato											0.625	0.625	1.842	1.5	117	0.012	0.012	0.147	0.05		4712	540	0.54	0.6	1
Mangatangi River SH2 Maramarua	Lower Waikato											0.11	0.11	1.12	1.12	174	0.005	0.005	0.038	0.038		5567	540	0.66	0.5	1
Mangatawhiri River Lyons Rd Buckingham Br	Lower Waikato											0.013	0.013	0.37	0.37	20	0.003	0.003	0.011	0.011		5108	540	0.08	1.6	1.6
Whangamarino River Island Block Rd	Lower Waikato											0.075	0.075	0.7	0.7	135	0.011	0.011	0.054	0.05		655	540	0.47	0.3	1
Whakapipi Stm SH22 Br	Lower Waikato											3.39	2.4	5.12	3.5	99	0.006	0.006	0.081	0.05		1773	540	0.25	1.1	1.1
Ohaeroa Stm SH22 Br	Lower Waikato											1.473	1	1.806	1.5	29	0.003	0.003	0.015	0.015		4667	540	0.10	0.8	1
Opuatia Stm Ponganui Rd	Lower Waikato											0.74	0.74	1.06	1.06	71	0.005	0.005	0.016	0.016		2898	540	0.73	0.6	1
Awaroa River (Waiuku) Otaua Rd Br Moseley Rd	Lower Waikato											1.369	1	2.31	1.5	32	0.021	0.021	0.135	0.05		1017	540	0.12	0.4	1
Waipa Waikato Freshwater Management Unit																										
Waipa River Mangaokewa Rd	Waipa											0.38	0.38	0.6	0.6	17	0.003	0.003	0.017	0.017		2417	540	0.18	1.5	1.6
Waipa River Otewa	Waipa											0.228	0.228	0.502	0.502	224	0.003	0.003	0.008	0.008		2036	540	1.76	2.1	2.1
Waipa River SH3 Otorohanga	Waipa											0.37	0.37	1.05	1.05	301	0.004	0.004	0.02	0.02		3289	540	0.94	1.2	1.6
Waipa River Pirongia-Ngutunui Rd Br	Waipa											0.565	0.565	1.27	1.27	977	0.008	0.008	0.023	0.023		4441	540	2.56	0.7	1
Waipa River Whatawhata Bridge	Waipa											0.673	0.673	1.319	1.319	612	0.009	0.009	0.026	0.026		3657	540	1.94	0.6	1
Ohote Stm Whatawhata/Horotiu Rd	Waipa											0.495	0.495	1.37	1.37	57	0.023	0.023	0.052	0.05		2142	540	0.19	0.6	1
Kaniwhaniwha Stm Wright Rd	Waipa											0.35	0.35	0.89	0.89	116	0.007	0.007	0.022	0.022		1917	540	0.53	0.9	1
Mangapiko Bowman Rd Stm	Waipa											1.369	1	2.49	1.5	592	0.022	0.022	0.076	0.03		7074	540	1.92	0.6	1
Mangaohoi Stm South Branch Maru Rd	Waipa											0.23	0.23	0.39	0.39	2	0.003	0.003	0.008	0.008		943	540	0.05	1.6	1.6
Mangauika Stm Te Awamutu Borough W/S intake	Waipa											0.21	0.21	0.28	0.28	4	0.002	0.002	0.003	0.003		1008	540	0.01	3.3	3.3
Puniu River Bartons Corner Rd Br	Waipa											0.65	0.65	1.28	1.28	511	0.007	0.007	0.029	0.029		2790	540	1.50	0.9	1
Mangatutu Stm Walker Rd Br	Waipa											0.38	0.38	0.88	0.88	152	0.003	0.003	0.012	0.012		738	540	0.61	1.5	1.6
Waitomo Stm SH31 Otorohanga	Waipa											0.52	0.52	0.83	0.83	45	0.008	0.008	0.025	0.025		1453	540	0.28	0.6	1
Mangapu River Otorohanga	Waipa											0.86	0.86	1.36	1.36	236	0.015	0.015	0.057	0.05		4284	540	1.34	0.7	1
Waitomo Stm Tumutumu Rd	Waipa											0.63	0.63	0.8	0.8	33	0.004	0.004	0.013	0.013		2241	540	0.23	1.1	1.6
Mangaokewa Stm Lawrence Street Br	Waipa											0.53	0.53	0.98	0.98	165	0.004	0.004	0.013	0.013		6224	540	1.87	1.4	1.6

Schedule 2 - Certification of Industry Schemes/Te Āpitihanga 2 – Te whakamana i ngā tohu o ngā Kaupapa Ahumahi

10.17. It is not up to the scheme itself to demonstrate the achievement of water quality targets it is the operator the scheme is the assurance system that audits that this is being done and gives assurance to Council. The scheme should include topics that align with water quality targets. But the actual targets themselves are the responsibility of the Council.

10.18. The Farm Environment Plans laid out in Schedules above provide for the farm risk assessment and the outline of actions to complete them. The Scheme should provide independent assurance that these actions and risk assessments have been completed.

Decision Sought

10.19. Amend the Schedule as follows:

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

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

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

Assessment Criteria

A. Certified Industry Scheme System

The application must demonstrate that the Certified Industry Scheme:

~~*1. Is consistent with:*~~

~~*a) the achievement of the water quality targets referred to in Objective 3; and*~~

~~*b) the purposes of Policy 2 or 3; and*~~

~~*c) the requirements of Rules 3.11.5.3 and 3.11.5.5.*~~

1. Has an appropriate ownership structure, governance arrangements and management.

2. Has documented systems, processes, and procedures to ensure:

a) Competency assessment and checks for people who generate and subsequently monitor Farm Environment Plans in line with the relevant industry qualifications as agreed with Waikato Regional Council

b) Competent and consistent performance in Farm Environment Plan preparation and audit.

c) Effective internal monitoring of performance.

d) Robust data management.

e) Timely provision of suitable quality data to Waikato Regional Council.

f) Timely and appropriate reporting.

g) Corrective actions will be implemented and escalated where required, including escalation to Waikato Regional Council if internal escalation is not successful.

h) Internal quality control.

i) The responsibilities of all parties to the Certified Industry Scheme are clearly stated.

j) An accurate and up to date register of scheme membership is maintained.

k) Transparency and public accountability of Certified Industry Schemes

l) 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 or 1B.*~~

11. Additions to Glossary of Terms/Ngā Āpitihanga ki te Rārangi Kupu

11.1. To achieve the intent of this submission HortNZ has suggested the following amendments to proposed terms and some new definitions.

Definition - Best Management Practice/s

11.2. HortNZ supports separate definitions for best and good management practice which for the horticultural sector are two different methods. Good management practices are described as an entry level practice that all growers could expect to undertake to manage nutrients. Best management practices are advanced mitigation options that often require significant investment which may present a barrier for uptake, especially for smaller growers.

Decision sought:

11.3. Retain the definition of Best Management Practice.

Catchment Collective

11.4. Enable the collaborative management of discharges at a scale greater than a single farm. Farmer / catchment collectives managing discharges as a single enterprise within a subcatchment or a water management unit are very likely to achieve environmental outcomes in a more coordinated and effective way.

Decision sought:

11.5. Add a new definition for a Catchment Collective as follows:

Definition - Catchment collective

Catchment collective: means a group of enterprises or properties in multiple ownership, where the owners of those enterprises or properties undertake farming activities and operate as a collective for the purposes of contaminant management.

Certified Farm Environment Planner (Commercial Vegetable Production)

11.6. HortNZ supports the development of an industry certification process for industry bodies and proposes an industry specific regulatory framework for commercial vegetable production.

Decision sought:

11.7. Add a new definition for a Certified Farm Environment Planner (Commercial Vegetable Production) as follows:

Certified Farm Environment Planner (Commercial Vegetable Production)

Certified Farm Environment Planner (Commercial Vegetable Production): 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 Environment

Planner (Commercial Vegetable Production) and has as a minimum the following qualifications and experience:

a. Tertiary qualifications in agronomy or agricultural engineering

b. More than 15 years' experience working with commercial vegetable cropping systems

c. A certificate of competence approved by the Waikato Regional Council relating to the relevant aspects of environmental farm plan assessment

Commercial vegetable production

11.8. HortNZ supports the definition of Commercial vegetable production. An amendment is required to remove the crop 'Asparagus' being a perennial plant which has effects more like small or low intensity fruit growing in the Waikato.

Decision sought:

11.9. Amend the definition of Commercial vegetable production as follows:

Definition - Commercial vegetable production

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

i. 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, parsnips, peas, puha, pumpkin, purslane, radishes, rakkyo, rhubarb, salad leaves, salsify, scallopini, scorzonera, shallots, silverbeet, spinach, spring onions, sprouted beans and seeds, squash, swedes, sweetcorn, taro, turnips, ulluco, watercress, witloof, yakon, yams, zucchinis, potatoes, tomatoes, ~~asparagus~~, onions; and

ii. the hybrids of the vegetables listed in subparagraph i.

Enterprise/s

11.10. The definition of enterprise should be amended to recognises the activity may involve parts of parcels of land to reflect leasing arrangements which may only involve areas of land in rural production.

11.11. The definition should also be amended to recognise that land use activities will vary within the nature of an enterprise and that all relevant primary production activities should be accounted for.

11.12. Commercial vegetable production activities typically occur across more than one subcatchment and the ability to operate one enterprise across multiple subcatchments must be provided.

Decision sought:

11.13. Amend the definition of Enterprise/s as follows:

Definition - Enterprise/s

Enterprise/s: means one or more parcels of land (or parts of parcels of land) held in single or multiple ownership to support the primary production activities undertaken ~~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 - Good Management Practice/s

11.14. HortNZ supports separate definitions for best and good management practice which for the horticultural sector are two different methods. Good management practices are described as an entry level practice that all growers could expect to undertake to manage nutrients. Best management practices are advanced mitigation options that often require significant investment which may present a barrier for uptake, especially for smaller growers.

Decision sought:

11.15. Retain the definition of Good Management Practice.

Nitrogen Reference Point

11.16. OVERSEER is a management tool of significant concern to the horticulture sector. The development of the commercial vegetable cropping modules within OVERSEER has been retarded by the emphasis on pastoral production systems. Recent experience in Canterbury has demonstrated the need for an alternative modelling approach to assess the benchmark contaminant discharge from commercial vegetable cropping rotations.

11.17. The proposed definition of Nitrogen Reference Point is supported by HortNZ to the extent that the plan provides for the establishment of an alternative method or model to establish a benchmark nitrogen and phosphorus discharge for commercial vegetable production systems from OVERSEER.

Decision sought:

11.18. Retain definition of Nitrogen Reference Point that provides for the establishment of an alternative method or model to establish a benchmark nitrogen and phosphorus discharge for commercial vegetable production systems.

Definition - Certified Farm Nutrient Advisor

11.19. The definition of Certified Farm Nutrient Adviser is too focussed on OVERSEER qualifications to provide for a vegetable production nutrient budget. It should be amended in the following manner:

Decision sought:

11.20. Amend the definition in the following way:

Certified Farm Nutrient Advisor:

is a person 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 competencies ~~qualifications and experience~~:
a. Has ~~completed nutrient management training to at least intermediate level,~~ sufficient agronomic knowledge to conduct the assessment of a budget for the farm or enterprise, and
b. Has ~~experience in nutrient management planning~~ the appropriate level of experience in the modelling tool utilised to develop the nutrient budget.

Subcatchment Scale Management Plan (SSMP)

11.21. Enable the collaborative management of discharges at a scale greater than a single farm. Farmer / catchment collectives managing discharges as a single enterprise within a subcatchment or a water management unit are very likely to achieve environmental outcomes in a more coordinated and effective way.

Decision sought:

11.22. Add new definition of Subcatchment Scale Management Plan (SSMP) as follows:

Subcatchment Scale Management Plan (SSMP)

Subcatchment Scale Management Plan (SSMP): means a subcatchment scale plan for that sets out actions and responsibilities for a Catchment Collective (representing all or part of a subcatchment) for the purposes of contaminant management that meets or exceeds the expected reduction in discharge to freshwater that would otherwise be achieved through a Farm Environment Plan.

APPENDIX 2: Relief sought in track changes to PC1 Variation

Waikato Regional Council Policy Series 2018/05

Supporting Document Incorporating Variation 1 Amendments to Proposed Waikato Regional Plan Change 1 - Waikato and Waipā River Catchments

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This supporting document, for information purposes, incorporates Variation 1 into Proposed Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments. This supporting document is to help the resource users understand Variation 1 in the context of Proposed Plan Change 1.

This information should not be relied on for the purposes of understanding Variation 1 and does not form part of the Variation or Plan Change document. Refer to the notified Variation 1 to the Proposed Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments, Proposed Plan Change 1 and withdrawal addendum.

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Contents

Waikato Regional Council Supporting Document
Incorporating Variation 1 amendments to PPC1

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
Co-chair, Healthy Rivers Wai Ora Committee
Waikato Regional Council

Kataraina Hodge
Co-chair, Healthy Rivers Wai Ora Committee
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 hōnore ki te tāpae i te *Panonitanga 1 i te Mahere ā-Rohe a Waikato - ngā Riu o ngā Awa o Waikato me Waipā (e marohitia nei).*

Ko tā tēnei pukapuka, he kōkiri i te haerenga o te 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 kohi 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 *Tauākī Kaupapa Here ā-Motu mō te Whakahaeretanga o te Wai Māori*, o te tau 2014, kia wātea ngā wai hei kautūtanga.

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

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

Kua whakaritea te nuinga o ngā kaupapa here e takoto ana i ngā whārangi e whai ake nei e tētehi rōpū tuatangata i roto i te kaupapa o Wai Ora. I roto i ngā tau e rua me te 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 matahīapo, e whakarite ana hoki i tētehi mahere tauroa e puta ai *Te Ture Whaimana* ki te ao mārama.

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

Councillor Alan Livingston	Kataraina Hodge
Co-chair, Healthy Rivers Wai Ora Committee	Co-chair, Healthy Rivers Wai Ora Committee
Waikato Regional Council	Raukawa Charitable Trust

Nā te kaihautū o te Kaunihera ā-Rohe o Waikato

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

He whakahirahira tēnei pukapuka, kaua 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 kohi 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 ō 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 ~~strikethrough~~ and additional text to be added shown as underline.

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

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

The Rules in Part A - Rules 3.11.5.1 to 3.11.5.7 of Chapter 3.11 have immediate legal effect from the date of notification (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

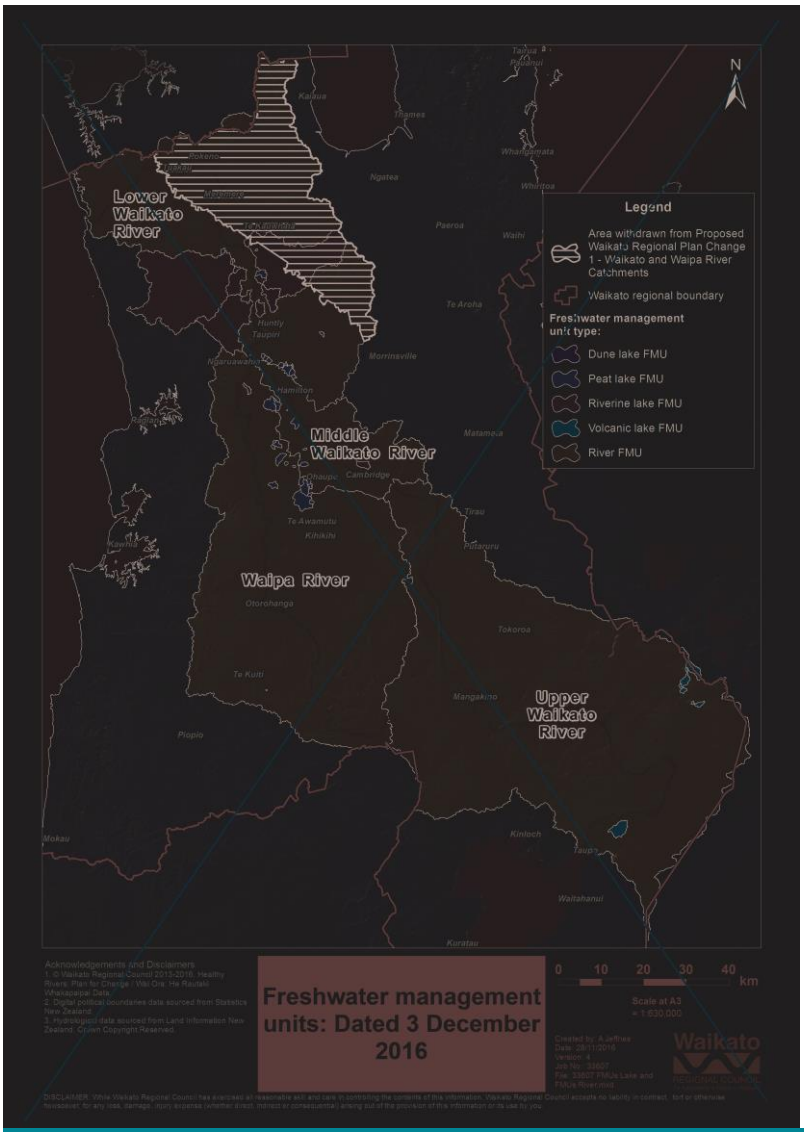
This Chapter 3.11 applies to the Waikato and Waipa River catchments. The map shown in Map 3.11-1 shows the general catchment boundary and the area in which the provisions of Chapter 3.11 apply. This Chapter is additional to all other parts of the Plan. Where there are any inconsistencies, Chapter 3.11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

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

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

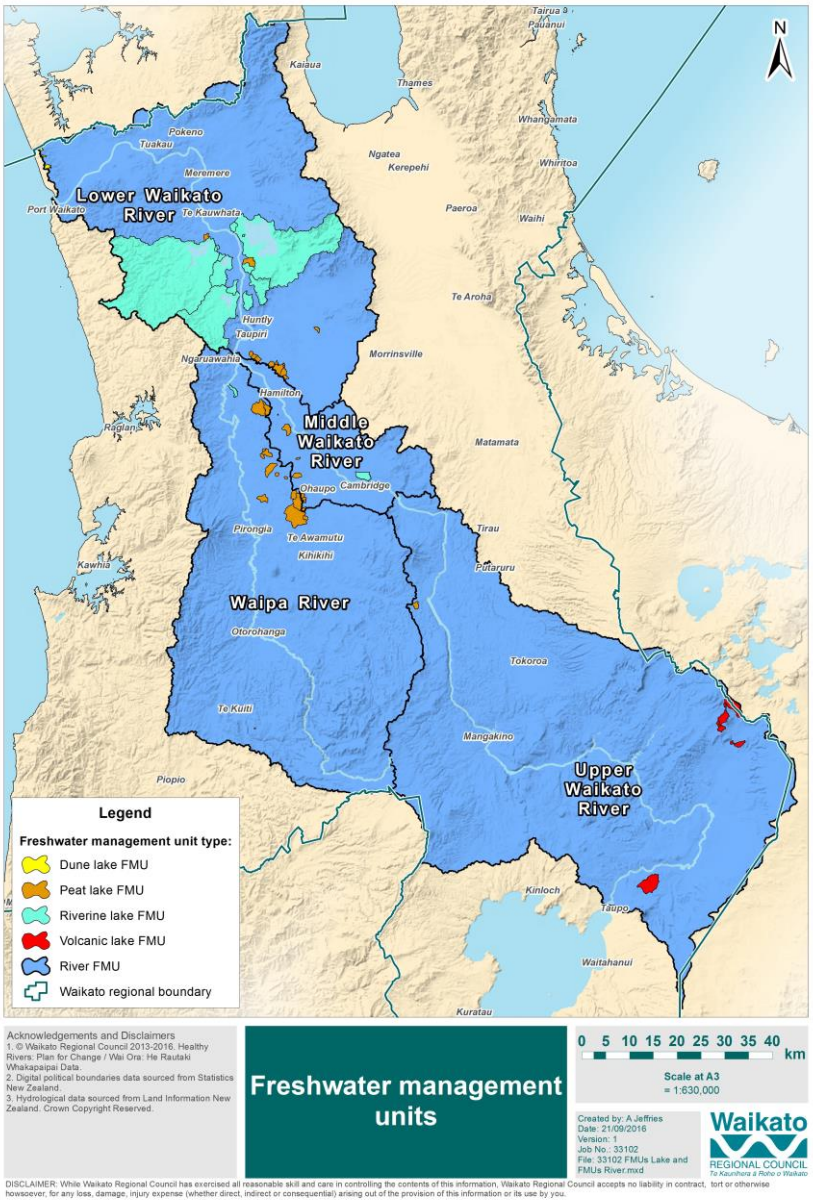
FMUs are required by central government's National Policy Statement for Freshwater Management 2014. FMUs enable monitoring of progress towards meeting targets^ and limits^.

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



Picture 3.1

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



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

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, Ngati 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[1] 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^ ensuring that the management of land use and activities is closely aligned with the biophysical capabilities of the land, the spatial location, and the likely effects of discharges on the lakes, rivers and wetlands in the catchment.

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 Rauaki 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 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.

1 *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^ and set limits^ or targets^ (a target is a limit to be achieved within a specified timeframe). Regional councils must ensure over-allocation^ of the water resource is avoided, or addressed where that has already occurred.

Current water quality monitoring results show that while there is variability across the Waikato and 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^ 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^ in Chapter 3.11 will require reductions in diffuse and point source contaminants.

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

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

The CSG identified resource use that affects the achievement of the freshwater objectives^ and long-term desired water quality, and for achieving 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.

Other challenges to achieving the Vision and Strategy

There were also many aspects of freshwater quality management that were considered to be out of scope for the CSG. These included:

- Management of Pest Aquatic Organisms.
- The effect on water quality management of past decisions regarding the management of water quantity (mainly as a result of Variation six).
- Consideration of the effects of plan changes being undertaken in adjacent regions.
- Consideration of the effects of contaminants other than sediment, phosphorus, nitrogen and bacteria.
- Consideration of the effects of subdivision, use and development on water quality-particularly in relation to the use of rural land for greenfield residential, industrial and commercial development.
- The effect on water quality of the wider suite of rules[1] enabling subdivision of rural land and the provision of drainage, roads, stormwater and sewage infrastructure.
- Consideration of who benefits from better water quality management and who should be involved in funding restoration by phasing out the overallocation of contaminants.
- Opportunities to trade an allocation of contaminants to allow a highest value use as market conditions change over time.

These matters are not addressed in PC1 but they remain relevant and will need to be considered in future plan changes and freshwater quality management decision making.

PC1 does not address all sources of contaminants that impact on values identified in the Vision and Strategy and acknowledges that previous decisions on the Waikato Regional Plan regulatory framework provide additional challenges for contaminant management. Variation 6 to the Waikato Regional Plan supported pastoral activity by authorising previously unconsented water takes for dairy shed wash down and milk cooling and also introduced a clawback of water quantity allocation post 2030 which will reduce access to a key mitigation of nutrient discharges.

[1] Operative Waikato Regional Plan, particularly modules 3, 4, 5 and 7.

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^ and limits^ in subsequent regional plans to be developed.

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

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

- stock exclusion from water bodies as a priority mitigation action
- Farm Environment Plans (including those for commercial vegetable producers) that ensure industry-specific good management 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 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.

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

- Recognise the essential aspects of the vegetable production industry in the Waikato.
- Identify that existing vegetable production has a priority over any new production that is likely to have a greater contribution of discharges.
- Authorised farm enterprise through a capped area controlled activity consent, allows for rotation across new and existing land parcels.
- Opportunities for new vegetable production are available if the proposed operation can demonstrate an overall decrease in discharges (across all four contaminants) compared to the activity it is replacing.
- Recognition of permanent fruit production as a low intensity farming activity

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^ and targets^ 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 taupatupatutanga 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 0 i tēnei upoko, arā ko te whakaoranga o te kounga wai o roto i te awa o Waikato, kia pai ai tā te tangata kaukau ki roto, kia pai ai te kohi 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^ e whakaū ana i te hāngai pū o ngā tūmahi me te whakahaeretanga o te whakamahinga whenua ki ngā āheinga ahupūngao koiora 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 mārire 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 ō 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 Rārangi Whakawhiti Kōrero 1 o te RMA ngā here kia mātua whakawhiti kōrero me ētehi hunga, pērā i ngā rūnanga ā-iwi, i te wā e whakaritea ana te Whakataurangitanga. Kua oti ngā whakawhitinga kōrero me ngā hunga e pāngia ana, tae atu ki ngā rūnanga ā-iwi e hāngai ana, ā, kua āta arohia ngā take i ara ake ai i aua whakawhitinga kōrero e te Kaunihera ā-Rohe o Waikato i te whakaritenga o Te Whakataurangitanga Tuatahi. Nā ngā whakawhitinga kōrero i hua ai Te Whakataurangitanga i te Panonitanga Tuatahi o te Mahere e Marohitia nei.

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

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

E whakaaturia mai ana i ngā hua o te aroturuki ā-kounga wai, ahakoa ngā rerekētanga i ngā wāhi katoa o ngā riu o ngā awa o Waikato me Waipā, he kino tonu ngā pānga ki ngā hōpua wai nā ngā rukenga ā-hauota, ā-pūtūtae-whetū, ā-waiparapara, ā-tukumate ora poto anō hoki. I whakatau te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga, he nui rawa te tohanga^ i te horopaki o te kounga wai. Kāore e taea e ngā hōpua wai o ngā riu o ngā awa o Waikato me Waipā te whakaputa ētehi atu rukenga ā-hauota, ā-pūtūtae-whetū, ā-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 hiahiatia ana e ngā hapori ā-rohe o Waikato hei ngā tau e heke mai ana.

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

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

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

Kua kōwhiri te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga i te 80 tau hei pae wā ki te whakatutuki i ngā whāinga kounga wai o Te Ture Whaimana. He pae wā tēnei ka pā ki ngā whakatupuranga maha, ā, he nui ake hoki te tūmanako i ngā pae o raro ā-motu kua whakatakotoria i te Tauākī Kaupapa Here ā-Motu mō te Whakahaere Wai Māori, nā te mea e whai ana tēnei ki te whakatutuki i ngā paerewa teitei ake kia pai ai tā te tangata kaukau ki roto i te wai, kia pai ai hoki te kohi kai i ngā wāhi katoa o ngā awa o Waikato me Waipā, mai i ngā mātāpuna ki ngā pūaha, me ngā riu. E ai ki ngā pārongo e wātea ana ināianei, kua whakatau te Rōpū Mahi Ngātahi o ngā Hunga Whai Pānga ka nui te utu, ka uaua 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^ me ngā tāpuitanga^ i roto i ngā mahere ā-rohe ka whai ake.

Nā te nui o te panonitanga me puta rawa e tutuki ai ngā tāpuitanga^ i roto i te 80 tau, he whāinga nui tonu te whakatutuki i te wāhanga tuatahi o ngā whāinga wai Māori tauroa o tēnei Mahere. Nā konei, kāore pea e kitea i roto i te wā poto te pānga o ngā tūmahi me ngā panonitanga i runga i te whenua ki te kounga wai i roto i ngā hōpua wai. I whēnei ai, nā te roa o te wā e memeha haere ai te kukūnga o ngā tāhawahawatanga i roto i te wai, whai i muri mai i te whakaritenga o ngā mahi whakangāwari i ngā pānga, otirā nā te roa o te wā e heke ai te hauota i te oneone ki ngā wai o te whenua, tae atu ki te wai ka rere ki ngā kōawāwa. Nā konei, ka roa pea te wā kātahi ka kitea i roto i te wai te pānga o ngā tūmahi o nāianei 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 whakatauira 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 kaipāmu ki te whakarite i ā rātou Mahere Taiao ā-Pāmu, ki te whakapūmau anō hoki i ngā kaupapa ā-ahumahi ahuwhenua
- whakawhanake te Kaunihera ā-rohe o Waikato i ētehi huarahi kāore e herea ana ki te anga ā-ture kia āhei ai te arotake i ngā tūponotanga ngaronga tāhawahawatanga i ngā riu o ngā kautawa, ka whakatinana hoki i ngā mahi whakangāwari pānga kāore e herea ki ngā rohenga o ngā pāmu, hei tautuhi i ngā urupare, iti katoa te utu.

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

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

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

Hei ngā tau e tū tata mai ana, ka herea te panonitanga ā-whakamahinga whenua, whēnei i te huringa o te ngahere hei pāmu kararehe, i te huringa rānei o te pāmu whakatupu kararehe hei pāmu miraka kau. Kua whakaritea kia āhua ngāwari ake ngā here mō te whakamahinga o ngā whenua Māori kāore anō kia whanake nā ngā rarururu ā-hītori me ngā rarururu ā-ture. Nā te mea kua pā ēnei rarururu 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^. These include establishing the values^ that are relevant in a FMU^, identifying the attributes^ that correspond to those values^, and setting objectives based on desired attribute states^. This section describes values and uses for the Waikato and Waipa Rivers, to provide background to the objectives and limits^ in later sections.

Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato[2]

"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."[3]

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

2 *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*

3 *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.[4] 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.

Picture 3.2

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

- The rivers contribute to a sense of community and sustaining community wellbeing.
- The rivers are an important part of whānau/family life, holding nostalgic feelings and memories and having deep cultural and historical significance.
- For River Iwi and other iwi, respect for the rivers, wetlands and springs lies at the heart of the spiritual and physical wellbeing of iwi and their tribal identity and culture. The river, wetlands and springs are ~~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, wetlands and springs. Te taura tāngata is the cord of kinship that binds iwi to rivers, wetlands and springs. It is a braid that is tightly woven, tying in all its strands. It is unbroken and infinite, forming the base for kaitiakitanga and the intergenerational role that iwi have as kaitiaki.
- The rivers are a shared responsibility, needing collective stewardship: kaitiakitanga – working together to restore the rivers. There is also an important intergenerational equity concept within kaitiakitanga.
- Mahitahi (collaborative work) encourages us all to work together to achieve common goals.

3.11.1.1 Mana Atua – Intrinsic values

Intrinsic values - Ancestry and History

~~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 korero tūpuna me ngā Kōrero o Mua~~o nehera~~ / Ancestry and History

~~Each~~ River Iwi and other iwi has their own unique and intergenerational relationship with the rivers, wetlands and springs.

- The rivers, wetlands and springs have always been seen as taonga (treasures) to all River Iwi and other iwi.
- The rivers, wetlands and springs have always given River Iwi and other iwi a strong sense of identity and connection with the land and water.
- Rivers, wetlands and springs were used holistically; River Iwi and other iwi understood the functional relationships with and between all parts of the rivers, wetlands and springs, spiritually and physically as kaitiaki.
- Tribal taniwha and tupua dwell in the rivers which are also the location of continued spiritual and cultural traditions and practices maintained over the many centuries.
- Iwi tupuna inhabited a rohe that teemed with life in the rivers, wetlands and springs. These resources were subject to access and use rights as an essential part of kaitiakitanga.
- Iwi strive to maintain and restore these relationships despite the modification and destruction that has occurred through different types of development ~~along~~affecting the rivers, wetlands and springs.

4 *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.*

Intrinsic values - Ecosystem health

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

Ecosystem health

The Waikato and Waipa catchments support resilient freshwater ecosystems and healthy freshwater populations of indigenous plants and animals.	• 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. • Clean fresh water restores and protects macroinvertebrate communities for their intrinsic value and as a food source for native fish, native birds and introduced game species. • Clean fresh water supports native freshwater fish species. • Wetlands and floodplains provide water purification, refuge, feeding and breeding habitat for aquatic species, habitat for water fowl and other ecosystem services such as flood attenuation. • Fresh water contributes to unique habitats including peat lakes, shallow riverine lakes and karst formations which all support unique biodiversity. • Rivers and adjacent riparian margins have value as ecological corridors.

Intrinsic values - Natural form and character

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

Natural form and character

Retain the integrity of the rivers within the landscape and its aesthetic features and natural qualities for people to enjoy.	• The rivers have amenity and naturalness values, including native vegetation, undeveloped stretches, and significant sites. • People are able to enjoy the natural environment; it contributes to their health and wellbeing. • The rivers are an ecological and cultural corridor. • The rivers as a whole living entity.

3.11.1.2 Mana Tangata – Use values

Use values - Wai tapu

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

Wai tapu and wai kino

Area of water body set aside for spiritual activities that support spiritual, cultural and physical wellbeing, or have properties that require additional caution or care.	• The rivers are a place for sacred rituals, wairua, healing, spiritual nurturing and cleansing. • The rivers provide for cultural and heritage practices and cultural wellbeing, particularly at significant sites. • The rivers have different states of wai tapu and wai kino that are adhered to and respected.

Use values - Geothermal

Ko ngā Ngāwhā / Geothermal

Geothermal

A valued resource that is naturally gifted to sustain certain activities (meeting spiritual and physical needs).

- Geothermal areas and their various resources were prized by tūpuna (ancestors) for their many uses and are still valued and used today.
- Geothermal areas of the river have natural form and character, and unique flora found only in the geothermal environment.
- Geothermal areas are a special microclimate.

Use values - Mahinga kai

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

Mahinga kai

The ability to access the Waikato and Waipa 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.

- The rivers provide for freshwater native species, native vegetation, and habitat for native animals.
- The rivers provide for freshwater game and introduced kai species.
- The rivers provide for cultural wellbeing, knowledge transfer, intergenerational harvest, obligations of manaakitanga (to give hospitality to, respect, generosity and care for others) and cultural opportunities, particularly at significant sites.
- The rivers should be safe to take food from, both fisheries and kai.
- The rivers support aquatic life, healthy biodiversity, ecosystem services, flora and fauna and biodiversity benefits for all.
- The rivers are a corridor.
- The rivers provide resources available for use which could be managed in a sustainable way.
- The rivers provide for recreation needs and for social wellbeing.

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

The rivers are a place to swim and undertake recreation activities in an environment that poses minimal risk to health.

- The rivers provide for recreational use, social needs and social wellbeing, are widely used by the community, and are a place to relax, play, exercise and have an active lifestyle.
- An important value for the rivers is cleanliness; the rivers should be safe for people to swim in.
- The rivers provide resources available for use which could be managed in a sustainable way.

Use values - Transport and tauranga waka

He urungi / Navigation

Transport and tauranga waka

All communities can use the rivers to pilot their vehicles and waka and navigate to their destinations.

- The rivers provide for recreational use (navigation), and sporting opportunities.
- The rivers are a corridor, mode of transport and mode of communication.
- The rivers provide for culture and heritage, cultural wellbeing, and social wellbeing, particularly at significant sites.

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.

- The rivers support a wide variety of primary production in the catchment, including dairy, meat, wool, horticulture and forestry.
- There are unique environments within the Waikato (e.g. Pukekohe and Pukekawa) that support primary producton activities, critical in the national domestic food chain.
- Due to the economies of scale of these industries, other service sectors, such as agritech, aviation and manufacturing, are able to operate.
- These industries combined contribute significantly to regional and national GDP, exports, food production and employment.

The rivers and the surrounding land offer unique opportunities for many communities and industries to operate, contributing to the lifestyle and sense of community, pride and culture in rural Waikato.

Water supply

Ko ngā hapori wai Māori / Municipal and domestic water supply

Water supply

The rivers provide for community water supply, municipal supply, drinkable water supply and health.

- 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.

Use values - Commercial, municipal and industrial use

Ko ngā āu putea / Economic or commercial development

Commercial, municipal and industrial use

The rivers provide economic opportunities to people, businesses and industries.	Fresh water is used for industrial and municipal processes, which rely on the assimilative capacity for discharges to surface water bodies. In addition: • The rivers provide for economic wellbeing, financial and economic contribution, individual businesses and the community and the vibrancy of small towns. They are working rivers; they create wealth. • Those industries are important to the monetary economy of Waikato region, enabling a positive brand to promote to overseas markets. • The rivers provide for domestic and international tourism. Promotion of a clean, green image attracts international and domestic visitors. • The rivers provide assimilative capacity for wastewater disposal, flood and stormwater, and ecosystem services through community schemes or on site disposal.

Use values - Electricity generation

Electricity generation

The river provides for reliable, renewable hydro and geothermal energy sources and thermal generation, securing national self-reliance and resilience. 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.	• Waikato hydro scheme extends over 186km, comprising Lake Taupō storage, dams, lakes, and power stations. Tongariro Power scheme adds 20 per cent to natural inflows to Lake Taupō. • Huntly Power Station's role in the New Zealand electricity system is pivotal, particularly when weather dependent renewable generation is not available. Fresh water is used for cooling and process water. • Geothermal power stations located on multiple geothermal systems use fresh water for cooling, process water and drilling.

Use values - Mitigating flood hazards

Mitigating flood hazards

Flood management systems protect land used and inhabited by people.	• River engineering, including stopbanks and diversions, protect land and infrastructure from damage by flooding.

3.11.2 Objectives/Ngā Whāinga

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

By 2096, the adverse effects from discharges of nitrogen, phosphorus, sediment and microbial pathogens to land and water are reduced resulting in achievement of the desired state of intrinsic freshwater values for the Waikato River, represented by the ~~restoration and protection of the~~ 80-year water quality attribute^ targets^ in Table 3.11-1.

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

Waikato and Waipa communities and their economy benefit from the restoration and protection of water quality in the Waikato River catchment. The restoration and protection of water quality, should, ~~which~~ enable~~s~~ the people and communities to continue to provide for their social, economic and cultural wellbeing.

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

Actions put in place and implemented by 2026 to reduce discharges of nitrogen, phosphorus, sediment and microbial pathogens, are sufficient to achieve 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 or achievement of the contaminant load reduction targets specified for each subcatchment in Schedule 1C Table XX[2].".

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

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

a. considering the values and uses when taking action to achieve the attribute^ targets^ for the Waikato and Waipa Rivers in Table 3.11-1; or achievement of the contaminant load reduction targets specified for each subcatchment in Schedule 1C Table XX; 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. and

c. recognising that this plan change is transitional, to provide time to develop the tools required to more efficiently allocate responsibility for achieving contaminant reduction targets in the long-term.

d. enabling the production of contaminant accounting frameworks that support robust measurement of progress to achieving the long-term and short-term target states for attributes and subcatchment load limits by more accurately identifying property level responsibilities for contaminant reduction.

[2] For the purpose of this relief HortNZ has produced a 10 year Subcatchment Load Target Table (Schedule 1C Table XX) and attached it to proposed relief as part of new Schedule 1C below. As an alternative where it is mentioned in this submission it could be inserted as a new part of Table 3-11-1

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

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

a. tangata whenua have the ability to:

   i. manage their own lands and resources, by exercising mana whakahaere, for the benefit of their people; and

   ii. actively sustain a relationship with ancestral land and with the rivers and other water bodies in the catchment; and

b. new impediments to the flexibility of the use of tangata whenua ancestral lands are minimised; and

c. improvement in the rivers' water quality and the exercise of kaitiakitanga increase the spiritual and physical wellbeing of iwi and their tribal and cultural identity.

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

a. Nitrogen, phosphorus, sediment and microbial pathogen loads in the catchment of Whangamarino Wetland are reduced in the short term, to make progress towards the long term restoration of Whangamarino Wetland; and

b. The management of contaminant loads entering Whangamarino Wetland is consistent with the achievement of the water quality attribute^targets^ in Table 3.11-1.

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^ for water quality consistent with the Vision and Strategy. Objective 1 sets aspirational 80-year water quality targets^, which result in improvements in water quality from the current state monitored in 2010-2014. The water quality attributes^ listed in Table 3.11-1 (and / or the contaminant load reduction targets specified for each subcatchment in Schedule 1C Table XX) 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. There is benefit in providing flexibility to land managers seeking to achieve reductions collaboratively at a catchment or subcatchment scale. Contaminant load targets are therefore set for subcatchments to support achieving the Vision and Strategy. 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.

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^ targets^ may require a potentially significant departure from how businesses and communities currently function, and it is important to minimise economic and social disruption during this transition.

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. A range of actions will be promoted including collaborative approaches to managing discharges at a subcatchment scale to achieve subcatchment load limits.

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~~ giving effect to ~~by~~ the targets and limits set in Objective 1.

Reasons for adopting Objective 4

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

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

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

The consenting regime will manage the discharges from activities by managing the use. The regime is, therefore, a discharge consent regime under section 15 RMA not a land use consent regime under section 9 RMA.

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 diffuse discharges 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 poto

Manage and require reductions in sub-catchment-wide discharges of nitrogen, phosphorus, sediment and microbial pathogens, by:

a. Enabling activities with a low level of contaminant discharge to water bodies provided those discharges do not increase; and

b. Requiring farming activities with moderate to high levels of contaminant discharge to water bodies to reduce the effect of their discharges through on-farm and / or off-farm actions;; ~~and~~

ba. Enabling collective action at a catchment scale by groups seeking to manage discharges as a single entity; and

bb Providing criteria for the approval of natural resource accounting systems used to enable catchment or sub catchment based approaches;

bc Providing a table of ten-year sub catchment load targets for the four contaminants (Schedule 1C Table XX),

c. Progressively excluding cattle, horses, deer and pigs from rivers, streams, drains, wetlands and lakes.

Policy 2: 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

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

a. Taking a tailored, risk based approach to define mitigation actions on the land that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens, with the mitigation actions to be specified in a Farm or Enterprise Environment Plan either associated with a resource consent, or in specific requirements established by participation in a Certified Industry Scheme; and

b. Requiring the same level of rigour in developing, monitoring and auditing of mitigation actions on the land that is set out in a Farm or Enterprise Environment Plan, whether it is established with a resource consent or through Certified Industry Schemes; and

c. Establishing a Nitrogen Reference Point or proxy for ~~the~~ a property or enterprise that is not part of a consented catchment collective managing a range of properties as a single group; and

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) when assessed across all 4 contaminants, and proportionate to the scale tailored to ensure reductions are targeted at actions within the subcatchments that will improve the values of freshwater specified within this plan ~~of water quality improvement required in the sub-catchment;~~ and

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.

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

Manage and require reductions in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens from commercial vegetable production through a tailored, property or enterprise-specific approach to consenting discharges where where:

a. Flexibility is provided to undertake crop rotations on changing parcels of land for commercial vegetable production, while reducing average contaminant discharges over time; and

b. The maximum area in production for a property or enterprise is established and capped utilising commercial vegetable production data sourced from the 10 years up to 2016; and

c. Establishing a Nitrogen Reference Point for each property or enterprise[3].; and

~~d. A 10% decrease in the diffuse discharge of nitrogen and a tailored reduction in the diffuse discharge of phosphorus, sediment and microbial pathogens is achieved across the sector through the implementation of Best or Good Management Practices; and~~

d. A tailored reduction of no more than 5% through the implementation of Best or Good Management Practices in the diffuse discharge of nitrogen, phosphorus, and sediment is achieved across the sector through the while recognising:

- the absent or low risk of discharges of microbial pathogens from commercial vegetable production;
- the need to preserve aspects of commercial vegetable production required to maintain domestic supply of vegetables;
- the pressure on and scarcity of land suitable for commercial vegetable production. This pressure has recently increased as a result of greenfields expansion onto versatile land in the Auckland region.
- prior 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 or a collective enterprise managing discharges as a group.

f. Commercial vegetable production enterprises that ~~reduce~~ can demonstrate an overall reduction in the combined discharges of nitrogen, phosphorus, sediment and microbial pathogens (compared to the existing activity) 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. Consent will generally be granted for a term greater than 15 years

i. An offset measure may be proposed in an alternative location or locations to the non-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:

i. Primary discharge does not result in any significant toxic adverse effect at the non-point source discharge location; and
ii. Offset measure provides an equivalent benefit for the values of freshwater specified in this plan; and
iii. Offset measure occurs preferably within the same sub-catchment in which the primary discharge occurs and if this is not practicable, then within the same Freshwater Management Unit or a Freshwater Management Unit located upstream, and
vi. Offset measure remains in place for the duration of the consent and is secured by consent condition.

Policy 4: 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

[3] if it is considered that policy 3C should be retained HortNZ seeks changes to the wording: "*Utilise proxy farm systems to approximate a nitrogen reference point in recognition that OVERSEER is unlikely to identify a nitrogen reference point for commercial vegetable production systems that is accurate enough for the purpose*".

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 take mitigation actions that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens in order for Objective 1 to be met.

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

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.

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 under Rule 3.11.5.7 that demonstrate on the balance an increase in the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens will generally not be granted.

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

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

Prepare for further diffuse discharge reductions and any future property or enterprise-level allocation of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens that will be required by subsequent regional plans, by implementing the policies and methods in this chapter. To ensure this 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[5] 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.

e. Having regard for the finite nature of High Class Soils

f. Incorporating the principle of "polluter pays"; meaning that when assessed across the balance of contaminant discharges to water those having the greatest effect bear a proportionally greater cost of the transition."

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

Prioritise the management of land and water resources by implementing Policies 2, 3 and 9, and in accordance with the prioritisation of areas set out in Table 3.11-2. Priority areas include:

a. Sub-catchments where there is a greater gap between the water quality targets^ in Objective 1 (Table 3.11-1) and current water quality; and

b. ~~Lakes Freshwater Management Units^; and~~

c. Whangamarino Wetland.

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

5 *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^ related to nitrogen, phosphorus, microbial pathogens and sediment for the surface waters that the land is hydrologically connected to; and

e) the desired values^ 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.

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 and catchment collective responses.. 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; and

b. Assessing the reasons for current water quality and sources of contaminant discharge, at various scales in a sub-catchment; and

c. Encouraging cost-effective mitigations where they have the biggest effect on improving water quality; and

da. Enable the collaborative management of discharges at a scale greater than a single farm and provide a consenting pathway for groups that form to take responsibility for contaminant reductions by implementing a combination of catchment and paddock scale mitigations that are able to be measured and reported. Where a consent application has been approved under 3.11.5.X, the entity is allocated responsibility for a proportion of the allowable discharge limits based on the area of land covered by the consent and the load reduction targets specified for each sub catchment in Schedule 1C Table XX.

d. Allowing, where multiple farming enterprises contribute to a mitigation, 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.

e. Provide for offsetting where it can be demonstrated there will be a commensurate effect on the restoration of the health and well-being of the Waikato River.

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:

a. Continued operation of regionally significant infrastructure´; and

b. Continued operation of regionally significant industry´.

Policy 11: Application of Best Practicable Option and mitigation or offset of 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 nitrogen, phosphorus, sediment or microbial pathogens to water or onto or into land in the Waikato and Waipa River catchments to adopt the Best Practicable Option* to avoid or mitigate the adverse effects of the discharge, at the time a resource consent application is decided. Where it is not practicable to avoid or mitigate all adverse effects, 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 toxic adverse effect at the point source discharge location; and

b. Offset measure is for the same contaminant; and

c. Offset measure occurs preferably within the same sub-catchment in which the primary discharge occurs and if this is not practicable, then within the same Freshwater Management Unit^ or a Freshwater Management Unit^ located upstream, and

d. Offset measure remains in place for the duration of the consent and is secured by consent condition.

Policy 12: Additional considerations for 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

Consider 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 achievement of the short term targets^ in Objective 3 or the progression towards the 80-year targets^ in Objective 1, taking into account:

a. The relative proportion of nitrogen, phosphorus, sediment or microbial pathogens that the particular point source discharge contributes to the catchment load; and

b. Past technology upgrades undertaken to model, monitor and reduce the discharge of nitrogen, phosphorus, sediment or microbial pathogens within the previous consent term; and

c. The ability to stage future mitigation actions to allow investment costs to be spread over time and meet the water quality targets^ specified above; and

d. The diminishing return on investment in treatment plant upgrades in respect of any resultant reduction in nitrogen, phosphorus, sediment or microbial pathogens when treatment plant processes are already achieving a high level of contaminant reduction through the application of the Best Practicable Option*.

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

When determining an appropriate duration for any consent granted consider the following matters:

a. A consent term exceeding 25 years, where the applicant demonstrates the approaches set out in Policies 11 and 12 will be met; and

b. The magnitude and significance of the investment made or proposed to be made in contaminant reduction measures and any resultant improvements in the receiving water quality; and

c. The need to provide appropriate certainty of investment where contaminant reduction measures are proposed (including investment in treatment plant upgrades or land based application technology).

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

Restore and protect lakes by 2096 through the implementation of a tailored lake-by-lake approach, guided by Lake Catchment Plans prepared over the next 10 years, which will include collecting and using data and information to support the management of activities in the lakes Freshwater Management Units^.

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

Protect and make progress towards restoration of Whangamarino Wetland by reducing the discharge of 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.

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

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

a. The relationship of tangata whenua with their ancestral lands; and

b. The exercise of kaitiakitanga; and

c. The creation of positive economic, social and cultural benefits for tangata whenua now and into the future;

Taking into account:

i. Best management practice actions for nitrogen, phosphorus, sediment and microbial pathogens for the proposed new type of land use; and

ii. The suitability of the land for development into the proposed new type of land use, reflecting the principles for future allocation as contained in Policy 7, including the risk of contaminant discharge from that land and the sensitivity of the receiving water body; and

iii. The short term targets^ to be achieved in Objective 3.

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^ 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^ and the functioning of ecosystems; and

b. Opportunities to enhance access and recreational values^ associated with the rivers.

3.11.4 Implementation methods/Ngā tikanga whakatinana

3.11.4.1 Working with others/Te mahi tahi me ētehi atu

Waikato Regional Council will work with stakeholders including Waikato River iwi partners, and other iwi, 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.

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

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

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

3.11.4.3 Farm Environment Plans/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 Whangamarino

Waikato Regional Council, working with others, will:

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

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^.

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

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

a. Identify the causes of current water quality decline, identify cost-effective measures to bring about reductions in contaminant discharges, and coordinate the reductions required at a property, enterprise and sub-catchment scale (including recommendations for funding where there is a public benefit identified).

b. Align works and services to reduce nitrogen, phosphorus, sediment and microbial pathogen discharges including riparian management, targeted reforestation, constructed wetlands, sediment traps and sediment detention bunds.

c. Assess and determine effective and efficient placement of constructed wetlands at a sub-catchment scale to improve water quality.

d. Support research that addresses the management of wetlands, including development of techniques to monitor ecological change and forecasting evolution of wetland characteristics resulting from existing land use in the wetland catchments.

e. Integrate the regulatory requirements to fence waterways with the requirements for effective drainage scheme management.

f. Coordinate funding of mitigation work by those contributing to water quality degradation, in proportion to that contribution.

g. Utilise public funds to support edge of field or catchment scale mitigations where those mitigations provide significant public benefit.

h. In support of method 3.11.4.7, utilise (and coordinate the management of) public funds to share the cost of constructing decision support tools meeting the criteria specified in Schedule 1C Table XX.

3.11.4.6 Funding and implementation/Te pūtea me te whakatinanatanga

Waikato Regional Council will:

a. Provide staff resources and leadership within the organisation for the implementation of Chapter 3.11.

b. Seek to secure funding for the implementation of Chapter 3.11 through the annual plan and long term plan processes.

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

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

a. Implementing processes that will support the setting of property or enterprise-level diffuse discharge limits in the future.

b. Researching and making publicly available:

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^ and / or subcatchment load targets identified Schedule 1C Table XX..

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^ and / or subcatchment load targets identified Schedule 1C Table XX.

c. Prior to 30 November 2020, by working with the Foundation of Arable Research, Horticulture New Zealand and The Pukekohe Vegetable Growers Association to develop a proxy nitrogen reference point for enterprises managing multiple properties and crops using a model or method approved by the Chief Executive of Waikato Regional Council.

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3.11.4.8 Reviewing Chapter 3.11 and developing an allocation framework for the next Regional

Plan/Te arotake i te Upoko 3.11, te whakarite hoki i tētehi anga toha mō te Mahere ā-Rohe e whai ake ana

Waikato Regional Council will:

a. Develop discharge allocation frameworks for individual properties and enterprises based on information collected under Method 3.11.4.7, taking into account the best available data, knowledge and technology at the time; and

b. Use this to inform future changes to the Waikato Regional Plan to manage discharges of nitrogen, phosphorus, sediment and microbial pathogens at a property or enterprise-level to meet the targets^ in the Objectives.

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

Waikato Regional Council will:

a. Continue to work with territorial authorities to implement the Waikato Regional Policy Statement set of principles that guide future development of the built environment which anticipates and addresses cumulative effects over the long term including avoiding the degradation of freshwater resources and discharge of contaminates from urban activities into the urban environment.

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.

c. Assess the contribution of contaminants to waterbodies from urban areas over time to ensure that urban discharges are accounted for, to allow responsibility for managing urban discharges to be allocated.

d. In evaluating c. above, publicly report the assessment of contributions and their assessed effect on values for freshwater identified in this plan change."

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^, including:

a. Collecting information on nitrogen, phosphorus, sediment and microbial pathogen levels in the respective fresh water bodies in each Freshwater Management Unit^ 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^.

b. Using the information collected to establish the baseline data for compiling a monitoring plan and to assess progress towards achieving the Table 11-1 water quality attribute^ targets^; and

ca. Produce a framework model for the greater Waikato River and surrounding land using the best available data, that can be adapted to include new decision support tools at the subcatchment level

c. Using state of the environment monitoring data including biological monitoring tools such as the Macroinvertebrate Community Index to provide the basis for identifying and reporting on long-term trends; and

d. An information and accounting system for the diffuse discharges from properties and enterprises that supports the management of nitrogen, phosphorus, sediment and microbial pathogens diffuse discharges at ~~an~~ subcatchment enterprise or property scale.

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

Waikato Regional Council will:

a. Review and report on the progress towards and achievement of the 80-year water quality objectives of Chapter 3.11.

b. Research and identify methods to measure actions at a sub-catchment, property and enterprise level, and their contribution to reductions in the discharge of contaminants.

c. Monitor the achievement of the values^ 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.

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.

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

4.x The farming activities form part of an enterprise being undertaken on more than one property; where the primary activity is fruit production (considered a low intensity farming activity).

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.

7.x The farming activities form part of an enterprise being undertaken on more than one property; where the primary activity is fruit production (considered a low intensity farming activity).

3.11.5.2 Permitted Activity Rule – Other 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 farming activities

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

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

2. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C and Conditions 3(e) and 4(e) of this Rule; and

3. Where the property area is less than or equal to 20 hectares:

   a. The farming activities do not form part of an enterprise being undertaken on more than one property; and

   b. Where the land is:

      i. used for grazing livestock, the stocking rate of the land is no greater than the stocking rate of the land at 22 October 2016; or

      ii. not used for grazing livestock, the land use has the same or lower diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens as the land use at 22 October 2016; and

   c. Upon request, the landowner shall obtain and provide to the Council independent verification from a Certified Farm Environment Planner that the use of land is compliant with either b)(i) or b)(ii) above; and

   d. Upon request from the Council, a description of the current land use activities shall be provided to the Council; and

   e. Where the property or enterprise contains any of the water bodies listed in Schedule C, new fences installed after 22 October 2016 must be located to ensure cattle, horses, deer and pigs cannot be within three metres of the bed of the water body (excluding constructed wetlands and drains).

4. Where the property or enterprise area is greater than 20 hectares:

   a. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and

   b. The diffuse discharge of nitrogen from the property or enterprise does not exceed either:

      i. the Nitrogen Reference Point; or

      ii. 15kg nitrogen/hectare/year;
      whichever is the lesser, over the whole property or enterprise when assessed in accordance with Schedule B; and

   c. No part of the property or enterprise over 15 degrees slope is cultivated or grazed; and

   d. No winter forage crops are grazed in situ; and

   e. Where the property or enterprise contains any of the water bodies listed in Schedule C:

      i. There shall be no cultivation within 5 metres of the bed of the water body; and

      ii. New fences installed after 22 October 2016 must be located to ensure cattle, horses, deer and pigs cannot be within three metres of the bed of the water body (excluding constructed wetlands and drains); and

5. For all properties greater than 4.1 hectares, from ~~31 March 2019~~ 30 November 2020, in addition to the requirements of Schedule A, the following information must be provided to the Waikato Regional Council by 1 September each year:

a. Annual stock numbers; and

b. Annual fertiliser use; and

c. Annual brought in animal feed.

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

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

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

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

2. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and

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

4. The Certified Industry Scheme meets the criteria set out in Schedule 2 and has been approved by the Chief Executive Officer of Waikato Regional Council; and

5. A Farm Environment Plan which has been prepared in accordance with Schedule 1 and has been approved by a Certified Farm Environment Planner, is provided to the Waikato Regional Council as follows:

   a. By ~~1 July 2020~~ 1 March 2022 for properties or enterprises within Priority 1 sub-catchments listed in Table 3.11-2, and 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

6. The use of land shall be undertaken in accordance with the actions and timeframes specified in the Farm Environment Plan; and

7. The Farm Environment Plan provided under Condition 5 may be amended in accordance with the procedure set out in Schedule 1 and the use of land shall thereafter be undertaken in accordance with the amended plan; and

8. A copy of the Farm Environment Plan amended in accordance with condition (7) shall be provided to the Waikato Regional Council within 30 working days of the date of its amendment.

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

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

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

1. ~~1 January 2020~~ 1 September 2021 for properties or enterprises in Priority 1 sub-catchments listed in Table 3.11-2, and properties or enterprises with a Nitrogen Reference Point greater than the 75th percentile nitrogen leaching value;

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;
   Subject to the following conditions:

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

5. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and
   After the dates set out in 1), 2) and 3) above the use of land shall be a controlled activity (requiring resource consent), subject to the following standards and terms:

   a. A Farm Environment Plan has been prepared in conformance with Schedule 1 and has been approved by a Certified Farm Environment Planner, and is provided to the Waikato Regional Council at the time the resource consent application is lodged by the dates specified in I-III below; and

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

   c. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B and is provided to the Waikato Regional Council at the time the resource consent application is lodged; and

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

Matters of Control

Waikato Regional Council reserves control over the following matters:

i. The content of the Farm Environment Plan.

ii. The actions and timeframes for undertaking mitigation actions that maintain or reduce the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens to water or to land where they may enter water.

iii. The actions, timeframes and other measures to ensure that the diffuse discharge of nitrogen from the property or enterprise, as measured by the five-year rolling average annual nitrogen loss as determined by the use of the current version of OVERSEER®, does not increase beyond the property or enterprise's Nitrogen Reference Point, unless other suitable mitigations are specified.

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 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.

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~~1 March 2022

II. For Priority 2 sub-catchments, by ~~1 July 2023~~ 1 March 2025

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.

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

Rule 3.11.5.5 - Controlled 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 from commercial vegetable production in circumstances which may result in those contaminants ~~entering water, i~~s a permitted activity until ~~1 January 2020~~ 1 September 2021, from which date it shall be a controlled activity (requiring resource consent) subject to the following 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~~

   i in conformance with Schedule B; or

   ii Through use of a proxy farm system;

   to approximate the nitrogen reference, is produced for the property, enterprise or catchment collective 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 areas of land, and their locations broken down by sub-catchments [refer to Table 3.11-2], that ~~were~~ are 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 the period 1 July 2006 to 30 June 2016 ~~that~~ period, shall be provided to the Council; and

f. The total area of land across all subcatchments grown for which consent is sought for commercial vegetable production must not exceed the maximum land area of the property or enterprise that was used for commercial vegetable production during the period 1 July 2006 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

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.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i. The content of the Farm Environment Plan.

ii. The maximum area of land to be used for commercial vegetable production.

iii. The actions and timeframes 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 from activities existing prior to 2016 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 and information provision requirements for the holder of the resource consent to demonstrate and/or monitor compliance with 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.

Notification:

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

Consents will generally be granted for a term not less than 15 years.

Advisory note: Under section 20A(2) of the RMA a consent must be applied for within 6 months of ~~1 January 2020~~ 1 September 2021, namely by ~~1 July 2020~~ 1 March 2022.

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~~Discharges from 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).

Discharges related to the use of land for farming activities that either:

a) cannot 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); or

b) is for new commercial vegetable cropping that can demonstrate a lesser effect from the contaminant discharge compared with the existing activity (when the diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens are considered together.

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.

viii. With respect to applications made under 3.11.5.6 b), the relevant clauses of policy 3[4]

Notification:

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

[4] 7 All except clause b of policy 3

Rule 3.11.5.X - Restricted Discretionary Activity Rule – The management of contaminants from farming activities by a catchment collective

The management of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens onto or into land by a catchment collective 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. Achieving the contaminant load reduction targets specified for each for subcatchment in Schedule 1C Table XX
iv. The matter set out in Schedule 1C Catchment Collectives.
v. The term of the resource consent. Minimum 15 years.
vi. The monitoring, record keeping, reporting and information provision requirements for the holder of the resource consent.
vii. The time frame and circumstances under which the consent conditions may be reviewed.
viii. The matters addressed by Schedules A and C and the Nitrogen Reference Point being:

1. In conformance with Schedule B; or

2. Determined through use of proxy farm systems to approximate the nitrogen reference for the catchment collective; or

3. Through modelling a series of collective mitigations that are estimated sufficient to meet the load limit targets, in accordance with the criteria in schedule 1C.

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

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

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 that cannot be provided for through Rule 3.11.5.5, 3.11.5.6 b, or 3.11.5.X ~~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.

Alternative Relief:

Rule 3.11.5.7 - Non-Complying Activity Rule – Land Use Change

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, 3.11.5.6 b, or 3.11.5.X

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.

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

Properties with an area greater than 2 hectares (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~~ 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 if requested by the Council.

4. Registration information must be updated by the new owner of a property within 30 working days of the new owner taking possession of the property, or otherwise at the request of the Waikato Regional Council.

5. All property owners must provide:

a. The following information in respect of the land owner, and the person responsible for using the land (if different from the land 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 certificate(s) of title.

c. Physical address of the property.

d. A description of the land use activity or activities undertaken on the property as at 22 October 2016, including the land area of each activity.

e. The total land area of the property.

f. Where the land is used for grazing, the stocking rate of animals grazed on the land.

6. Properties that graze livestock must also provide a map showing:

a. 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.

Schedule B - Nitrogen Reference Point/Te Āpitihanga 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. ~~a.~~ The Nitrogen Reference Point must be calculated by a Certified Farm Nutrient Advisor to determine 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 Rule 3.11.5.7 where the Nitrogen Reference Point shall be determined through the Rule 3.11.5.7 consent process.

The Nitrogen Reference Point must be calculated by a person who is certified as being competent to do so, with a certification being approved by the Chief Executive of the Waikato Regional Council Certified Farm Nutrient Advisor to determine 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 Rule 3.11.5.7 where the Nitrogen Reference Point shall be determined through the Rule 3.11.5.7 consent process

b. The Nitrogen Reference Point shall be the highest 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 in kilograms per hectare per year during the reference period.

c. The Nitrogen Reference Point must be calculated using the current version of the OVERSEER®, APSIM or SPASMO Model (or any other model approved by ~~the Chief Executive of the Waikato Regional Council~~).

d. The Nitrogen Reference Point data shall comprise the electronic output file from the OVERSEER®, APSIM or SPASMO or other approved model, and where the OVERSEER® Model is used, it must be calculated using the OVERSEER® Best Practice Data Input Standards 2016, with the exceptions and inclusions set out in Schedule B Table 1.

e. The Nitrogen Reference Point and the Nitrogen Reference Point data must be provided to Waikato Regional Council within the period ~~1 September 2018~~1 May 2020 to ~~31 March 2019~~ 30 November 2020.

f. The reference period is the two financial years covering 2014/2015 and 2015/2016, except for commercial vegetable production in which case the reference period is 1 July 2006 to 30 June 2016.

g. The following records (where relevant to the land use undertaken on the property or enterprise) must be retained and ~~provided to~~ available for inspection by Waikato Regional Council at its request:

i. Stock numbers ~~as recorded in annual accounts~~ together with stock sale and purchase invoices;

ii. Dairy production data;

iii. Invoices for fertiliser applied to the land;

iv. Invoices for feed supplements sold or purchased;

v. Water use records for irrigation (to be averaged over 3 years or longer) in order to determine irrigation application rates;

vi. The representative range of ~~C~~crops grown on the land; and

vii. Horticulture crop diaries and NZGAP records.

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

OVERSEER® Parameter	Setting that must be used	Explanatory note

Farm model Pastoral and horticulture	To cover the entire enterprise including riparian, retired, forestry, and yards and races. The model is to include non-contiguous properties that are part of the enterprise that are in the same sub-catchment. If the farm (for example where dairy animals are grazed or wintered) is part of another farming business such as a drystock farm, the losses from those animals will be represented in the drystock farm's Overseer model.	To capture the "whole farm" in one Overseer® file, where possible, to truly represent nitrogen losses from farm in the catchment area.
Location Pastoral and horticulture	Select Waikato Region	This setting has an effect on climate settings and some animal characteristics and is required to ensure consistency.
Animal distribution – relative productivity pastoral only	Use "no differences between blocks" with the following exceptions: • Grazed pines or other woody vegetation. In this case use "Relative yield" and set the grazed pine blocks to 0.4 (40%). • Where the farm has a mixture of irrigated and non-irrigated areas. In this case use "Relative yield" and set the irrigated area to 1 (100%), and the non-irrigated areas to 0.75 (75%).	
Wetlands	Entered as Riparian Blocks	As per the 2016 OVERSEER® Best Practice Data Input Standards.
Stock number entry	Based on specific stock numbers only	To ensure consistency and accuracy of stock number inputs.
Animal weights	Only use OVERSEER® defaults – do not enter in weights and use the age at start setting where available (national averages).	Accurate animal weights are difficult to obtain and prove.
Block climate data	Only use the Climate Station tool For contiguous blocks use the coordinates from the location of the dairy shed or the middle of the farm area (for non-dairy). For non-contiguous blocks use individual blocks' climate station coordinates.	
Soil description	Use Soil Order – obtained from S-Map or where S-Map is unavailable from LRI 1:50,000 data or a soil map of the farm.	To ensure consistency between areas of the region that have S-Map data and those that don't.

Missing data	In the absence of Nitrogen Referencing information being provided the Waikato Regional Council will use appropriate default numbers for any necessary inputs to the OVERSEER® model (such default numbers will generally be around 75% of normal Freshwater Management Unit^ average values for those inputs).	Some farms will not be able to supply data, therefore a default must be established.

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

Except as provided by Exclusions I. and II., stock must be excluded from the water bodies listed in i. to iv. below as follows:

1. The water bodies 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 barrier formed by topography or vegetation.

2. New fences installed after 22 October 2016 must be located to ensure cattle, horses, deer and pigs cannot be within one metre of the bed of the water body (excluding constructed wetlands).

3. Livestock must not be permitted to enter onto or pass across the bed of the water body, except when using a livestock crossing structure.

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.

Water bodies from which cattle, horses, deer and pigs must be excluded:

i. Any river that continually contains surface water.

ii. Any drain that continually contains surface water.

iii. Any wetland, including a constructed wetland.

iv. Any lake.

Exclusions:

The following situations are excluded from clauses 1 and 2:

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.

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

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

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

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

The requirements set out in A apply to all Farm Environment Plans, including those prepared within a Certified Industry Scheme. A separate schedule has been prepared for commercial vegetable cropping systems and plans prepared by catchment collectives.

This schedule 1 applies to all farming activities other than commercial vegetable cropping systems, but it is acknowledged that some provisions will not be relevant to every farming activity.

A. Farm Environment Plans shall contain as a minimum:

1. The property or enterprise details:

(a) Full name, address and contact details (including email addresses and telephone numbers) of the person responsible for the property or enterprise.

(b) Trading name (if applicable, where the owner is a company or other entity).

(c) A list of land parcels which constitute the property or enterprise:

(i) the physical address and ownership of each parcel of land (if different from the person responsible for the property or enterprise) and any relevant farm identifiers such as the dairy supply number, Agribase identification number, valuation reference; and

(ii) The legal description of each parcel of land.

2. An assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens associated with the farming activities on the property, and the priority of those identified risks, having regard to sub-catchment targets in Table 3.11-1 and the priority of lakes within the sub-catchment. As a minimum, the risk assessment shall include (where relevant to the particular land use):

(a) A description of where and how stock shall be excluded from water bodies for stock exclusion including:

(i) the provision of fencing and livestock crossing structures to achieve compliance with Schedule C; and

(ii) for areas with a slope exceeding 25° 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 lass 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 and/or any other practicable measures considered necessary in an erosion and sediment control plan.

(c) A description of the critical source areas from which sediment, nitrogen, phosphorus and microbial pathogens are lost, including:

(i) the identification of intermittent waterways, overland flow paths cultivated land and areas prone to flooding and ponding, and an assessment of opportunities to minimise losses from these areas through appropriate stocking policy, stock exclusion and/or measures to detain floodwaters and settle out or otherwise remove sediment, nitrogen, phosphorus and microbial pathogens (e.g. detention bunds, sediment traps, natural and constructed wetlands); and

(ii) the identification of actively eroding areas, erosion prone areas, and areas of bare soil and appropriate measures for erosion and sediment control and re-vegetation; and

(iii) an assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens from cultivated land, tracks and races and livestock crossing structures to waterways, and the identification of appropriate measures to minimise these discharges (e.g. cut-off drains, and shaping); and

(iv) the identification of areas where effluent accumulates including yards, races, livestock crossing structures, underpasses, stock camps, and feed-out areas, and appropriate measures to minimise the risk of diffuse discharges of contaminants from these areas to groundwater or surface water; and

(v) the identification of other 'hotspots' such as fertiliser, silage, compost, or effluent storage facilities, wash-water facilities, offal or refuse disposal pits, and feeding or stock holding areas, and the appropriate measures to minimise the risk of diffuse discharges of contaminants from these areas to groundwater or surface water.

(d) An assessment of appropriate land use and grazing management for specific areas on the farm in order to maintain and improve the physical and biological condition of soils and minimise the diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens to water bodies, including:

(i) matching land use to land capability; and

(ii) identifying areas not suitable for grazing; and

(iii) stocking policy to maintain soil condition and pasture cover; and

(iv) the appropriate location and management of winter forage crops; and

(v) suitable management practices for strip grazing.

(e) A description of nutrient management practices including a nutrient budget for the farm enterprise calculated using the model OVERSEER® in accordance with the OVERSEER® use protocols, or using any other model or method approved by the Chief Executive Officer of Waikato Regional Council.

(f) A description of cultivation management, including:

(i) The identification of slopes over 15° and how cultivation on them will be avoided; unless contaminant discharges to water bodies from that cultivation can be avoided; and

(ii) How the adverse effects of cultivation on slopes of less than 15° will be mitigated through appropriate erosion and sediment controls for each paddock that will be cultivated including by:

(a) assessing where overland flows enters and exits the paddock in rainfall events; and

(b) identifying appropriate measures to divert overland flows from entering the cultivated paddock; and

(c) identifying measures to trap sediment leaving the cultivated paddock in overland flows; and

(d) maintaining appropriate buffers between cultivated areas and water bodies (minimum 5m setback).

(e) A description of collected animal effluent management including how the risks associated with the operation of effluent systems will be managed to minimise contaminant discharges to groundwater or surface water.

(f) A description of freshwater irrigation management including how contaminant loss arising from the irrigation system to groundwater or surface water will be minimised.

3 . A spatial risk map(s) at a scale that clearly shows:

(a) The boundaries of the property; and

(b) The locations of the ~~main~~ land use~~s~~[6] activities that occur on the property; and

(c) The locations of existing and future mitigation actions to manage contaminant diffuse discharges; and

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

(d) Any relevant internal property boundaries that relate to risks and mitigation actions described in this plan; and

(e) The location of continually flowing rivers, streams, and drains and permanent lakes, ponds and wetlands; and

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

(g) The location of critical source areas for contaminants, as identified in 2 (c) above.

4. A description of the actions that will be undertaken in response to the risks identified in the risk assessment in 2 above (having regard to their relative priority) as well as where the mandatory time-bound actions will be undertaken, and when and to what standard they will be completed.

5. A description of the following:

(a) Actions, timeframes and other measures to ensure that the diffuse discharge of nitrogen from the property or enterprise, as measured by the five-year rolling average annual nitrogen loss as determined by the use of the current version of OVERSEER®, does not increase beyond the property or enterprise's Nitrogen Reference Point, unless other suitable mitigations are specified; or

(b) Where the Nitrogen Reference Point exceeds the 75th percentile nitrogen leaching value, actions, timeframes and other measures to ensure the diffuse discharge of nitrogen is reduced so that it does not exceed the 75th ~~percentile~~ nitrogen leaching value by 1 July 2026, ~~except in the case of Rule 3.11.5.5.~~

~~Vegetable-growing minimum standards~~

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

~~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:~~ ~~○ form of fertiliser applied~~ ~~○ rate of application~~ ~~○ placement of fertiliser~~ ~~○ timing of application~~

Schedule 1B - Requirements for Farm Environment Plans for commercial vegetable production enterprises

1. A Farm Environment Plan shall be prepared in accordance with the requirements of A below. The Farm Environment Plan shall be certified asmeeting the requirements of A by a Certified Farm Environment Planner (commercial vegetable production). 2. The construction of a farm plan does not require duplication of material within existing farm environment plans that are considered sufficient for purpose by a Certified Farm Environment Planner (commercial vegetable production). 3. Farm plans are not required to duplicate material provided to Waikato Regional Council for the purpose of complying with other rules in the plan. 4. Farm Plans will not be incorporated into consent conditions as

a whole: but matters of control or discretion will include relevant actions committed to by the consent holder. 5. The Farm Environment Plan shall identify key risk areas for the discharge of sediment, nitrogen, phosphorus and microbial pathogens, and identify actions, and timeframes for those actions to be completed, in order to reduce the diffuse discharges of these contaminants where practicable.

The Farm Environment Plan must clearly identify how any specified consent condition will be complied with.

A Farm Environment Plans shall contain as a minimum: 1. The name of the legal entity registered with the Waikato Regional Council. 2. Information provided by the Council from registration between 1 May 2020 and 30 November 2020. 3. A description of the enterprise, detailing the general rotational cropping system, properties owned, leased and otherwise farmed on over time. This will include the legal description for each parcel of land. 4. An assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens associated with the farming activities on the property, and the priority of those identified risks, having regard to subcatchment targets in Table 3.11-1 and the priority of lakes within the subcatchment. As a minimum, the risk assessment shall include: a. A risk assessment for nutrient discharges that is approved by a Certified Farm Environment Planner (commercial vegetable crops). The risk assessment should be equivalent to the process outlined in Section 4 of the Horticulture New Zealand Code of Practice for Nutrient Management Version 1.0 August 2014. b. A risk assessment for soil conservation purposes, that is approved by a Certified Farm Environment Planner (commercial vegetable crops). The risk assessment should be equivalent to the process outlined in Section 1 of the Horticulture New Zealand Erosion &Sediment Control Guidelines for Vegetable Production Version 1.1 June 2014. c. If manures are used, undertake a microbiological discharge risk assessment. 5. If stock are present on land managed within the enterprise, provisions of Schedule 1 relating to the farming of animals apply. If stock are present a risk assessment for stock related discharges must be undertaken. 6. A schedule of mitigation actions and target completion dates derived from the risk assessments undertaken in 4 and 5 above. 7. Vegetable Growing Minimum Standards Farm environment plans required under Rule 3.11.5.5, 3.11.5.6 b, or 3.11.5.X shall, in addition to the matters set out above, ensure the following matters are addressed.

Commented [VH1]: Var1

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: □ form of fertiliser applied □ rate of application □ placement of fertiliser □ timing of application
9	Nitrogen	Maintain efficient irrigation to ensure yields and the export of nitrogen in crop are maximised.

Schedule 1C - Requirements for a subcatchment scale management plan applying to Rule 3.11.5.X iv - Restricted Discretionary Activity Rule – The management of contaminants from farming activities by a catchment collective

A subcatchment scale management plan (SSMP) shall be prepared in accordance with the requirements below.

1) The (SSMP) must be approved by the Regional Council Chief Executive before an application under Rule 3.11.5.X can be granted by the Council.

2) The SSMP must meet or exceed the expected reduction in discharges to freshwater that would be achieved through completing and implementing a farm or enterprise scale farm environment plan in accordance with Schedule 1 and Schedule 1b. The achievement in reduction of discharges must be comparable when considered over all of the

properties and enterprises managed by the SSMP.

3) The SSMP must be the responsibility of a legal entity that is accountable for achieving compliance with the conditions of a resource consent issued under Rule 3.11.5.X.

4) The SSMP must be supported by a decision support tool that is able to be utilised as the accounting framework for the relevant subcatchment. The decision support tool must:

a) Calibrate discharges and hydrological flows to observed monitoring sites within the catchment. The calibration must achieve at leastachieve a "Satisfactory" criteria for a daily model with NSE – 0.6, % bias – +/- 25%[5]

and the decision support tool must be capable of continuous upgrade and improvement.

b) Be capable of integrating with other subcatchment, freshwater management unit and catchment scale accounting systems.

c) Be able to measure mitigations for microbial, sediment, nitrogen and phosphorus discharges at all scales within the domain of the decision support tool to a standard approved by peer review agent approved by the Chief Executive of the Regional Council.

d) Be made available to the Council for use in assessing compliance with the load limit targets for the relevant subcatchment listed in Schedule 1C Table XX.

5) The SSMP must clearly identify how any specified consent condition will be complied with.

6) The SSMP shall contain as a minimum:

a) The name of the legal entity registered with the Waikato Regional Council. Information provided by the Council from registration between 1 May 2020 and 30 November 2020

b) A legal description of all properties and enterprises the legal entity described in Schedule 1C 3) above have legal authority to act on behalf of.

c) A description of the nature of enterprises, farms and properties and the domain of the SSMP.

d) An assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens associated with the activities within the SSMP domain, and the priority of those identified risks, having regard to sub-catchment load targets in Schedule 1C Table XX below.

e) A schedule of approved mitigation actions and target completion dates.

Schedule 1C Table XX Estimated Subcatchment unattenuated loads for the short-term water quality targets (excluding point sources)

[5] Based on that recommended by Moriasi et al 2007: http://hortnz.co.nz/assets/Uploads/moriasi-et-al-2007-modeleval.pdf

	FMU	Annual Median Chlorophyll a (mg/m3)		Annual Maximum Chlorophyll a (mg/m3)		Annual Median Total Nitrogen (mg/m3)		Annual Total Nitrogen Load t/yr	Annual Median Total Phosphorus (mg/m3)		Annual Total Phosphorus Load t/yr	Annual Median Nitrate (mg NO3-N/L)		Annual 95th percentile Nitrate (mg NO3-N/L)		Annual Nitrate Load t/yr	Annual Median Ammonia (mg NH4-N/L)		Annual Maximum Ammonia (mg NH4-N/L)		Annual Ammonia Load t/yr	95th percentile E. coli (E.coli/100mL)		Annual E.coli Load 10^15 organisms/yr	Clarity (m)	
		Short term	80 year	Short term	80 year	Short term	80 year	Short term	Short term	80 year	Short term	Short term	80 year	Short term	80 year	Short term	Short term	80 year	Short term	80 year	Short term	Short term	80 year	Short term	Short term	80 year
Waikato Freshwater Management Unit																										
o River at Ohaaki Br	Upper Waikato	1.5	1.5	13	13	134	134	255	10	10	18	0.039	0.039	0.062	0.062	255	0.002	0.002	0.013	0.013		70	70	1.00	3.8	3.8
o River at Ohakuri Tailrace Br	Upper Waikato	3.2	3.2	11	11	206	160	554	17	17	50	0.084	0.084	0.172	0.172	555	0.003	0.003	0.017	0.017		15	15	2.16	3.4	3.4

o River at Whakamaru Tailrace	Upper Waikato		5		25	260	160	364	20	20	31	0.101	0.101	0.23	0.23	364	0.003	0.003	0.01	0.01		60	60	1.39	2	3
o River at Waipapa tailrace	Upper Waikato	4.1	4.1	25	25	318	160	552	25	20	48	0.164	0.164	0.32	0.32	552	0.007	0.007	0.017	0.017		162	162	2.23	2	3
Stm at Broadlands Rd Br	Upper Waikato											0.45	0.45	0.53	0.53	129	0.003	0.003	0.009	0.009		92	92	0.49	1.8	3
tutahi Stm Vaile Rd Br	Upper Waikato											0.5	0.5	0.8	0.8	79	0.002	0.002	0.011	0.011		216	216	0.69		
pu Stm Homestead Rd Br	Upper Waikato											1.257	1	1.563	1.5	229	0.112	0.03	0.176	0.05		281	281	0.66		
kara Stm (Reporoa) SH5	Upper Waikato											1.27	1	1.59	1.5	24	0.008	0.008	0.062	0.05		1584	540	0.07	0.9	1
nui Stm SH5 Br	Upper Waikato											2.58	2.4	2.85	1.5	32	0.006	0.006	0.079	0.05		2335	540	0.08	1.4	1.6
pu Stm Campbell Rd Br	Upper Waikato											0.915	0.915	1.1	1.1	48	0.291	0.24	0.315	0.05		18	18	0.18	1.2	1.6
kokore Stm Hossack Rd	Upper Waikato											0.74	0.74	1.19	1.19	60	0.006	0.006	0.024	0.024		680	540	0.23	1.2	1.6
aki Stm Corbett Rd	Upper Waikato											0.77	0.77	0.87	0.87	10	0.002	0.002	0.012	0.012		98	98	0.06	2.7	3
atara Stm Ohakuri Rd	Upper Waikato											0.555	0.555	0.83	0.83	204	0.003	0.003	0.015	0.015		783	540	0.69	1.3	1.6
harakeke Stm SH30 (Off jct SH1)	Upper Waikato											0.525	0.525	0.75	0.75	35	0.003	0.003	0.015	0.015		684	540	0.11	1.1	1.6
pa Stm (Mokai) Tirohanga Rd Br	Upper Waikato											1.189	1	1.5	1.5	102	0.003	0.003	0.005	0.005		1147	540	0.52	1.2	1.6
kino Stm Sandel Rd	Upper Waikato											0.65	0.65	0.86	0.86	222	0.003	0.003	0.012	0.012		251	251	0.77	1.8	3
uru Stm SH1 Br	Upper Waikato											0.26	0.26	0.45	0.45	86	0.003	0.003	0.033	0.033		2106	540	0.23	0.8	1
mingi Stm Paraonui Rd Br	Upper Waikato											2.76	2.4	3.12	1.5	113	0.091	0.03	0.296	0.05		2151	540	0.29	0.8	1
whenua Stm Arapuni - Putaruru Rd	Upper Waikato											1.68	1	2.04	1.5	484	0.002	0.002	0.02	0.02		1363	540	1.23	1.3	1.6
Vaipa Stm Arapuni - Putaruru Rd	Upper Waikato											1.522	1	2.04	1.5	210	0.002	0.002	0.085	0.05		1377	540	0.69	1.5	1.6
l Waikato Freshwater Management Unit																												
o River Narrows Boat Ramp	Central Waikato	5.5	5	23	23	404	350	204	28	20	10	0.235	0.235	0.5	0.5	204	0.009	0.009	0.018	0.018		340	260	0.76	1.7	1.7
o River Horotiu Br	Central Waikato	6.1	5	23	23	432	350	78	34	20	3	0.26	0.26	0.53	0.53	78	0.007	0.007	0.029	0.029		774	540	0.50	1.4	1.6
ro Stm Hickey Rd Bridge	Central Waikato											0.52	0.52	1.689	1.5	94	0.008	0.008	0.031	0.031		4518	540	0.75	0.9	1
whero Stm Cambridge-Ohaupo Rd	Central Waikato											1.99	1	2.49	1.5	94	0.041	0.03	0.072	0.05		2920	540	0.30	0.3	1
onua Stm Hoeka Rd	Central Waikato											1.455	1	1.878	1.5	126	0.036	0.03	0.051	0.05		6372	540	0.44	1	1
one Stm Annebrooke Rd Br	Central Waikato											2.58	2.4	2.94	1.5	105	0.009	0.009	0.02	0.02		2052	540	0.35	0.9	1

kotukutuku Stm Peacockes Rd	Central Waikato											0.8	0.8	1.788	1.5	55	0.077	0.03	0.132	0.05		11394	540	0.15	0.5	1
whirwhiri Stm Edgecumbe Street	Central Waikato											0.88	0.88	1.24	1.24	36	0.256	0.24	0.318	0.05		5922	540	0.14	0.4	1
roa Stm Tauhara Dr	Central Waikato											0.815	0.815	1.572	1.5	14	0.096	0.03	0.183	0.05		2124	540	0.11	0.5	1
Waikato Freshwater Management Unit																												
o River Huntly-Tainui Br	Lower Waikato	5.9	5	19	19	562	350	314	43	20	9	0.365	0.365	0.9	0.9	314	0.005	0.005	0.015	0.015		1944	540	0.99	0.9	1
o River Mercer Br	Lower Waikato	10	5	30	25	631	350	484	49	20	31	0.365	0.365	0.87	0.87	484	0.003	0.003	0.01	0.01		1494	540	2.82		
o River Tuakau Br	Lower Waikato	11.3	5	37	25	571	350	156	50	20	9	0.325	0.325	0.88	0.88	156	0.003	0.003	0.008	0.008		1584	540	0.46	0.7	1
orau Stm Henry Rd	Lower Waikato											1.279	1	4.4	3.5	414	0.25	0.24	0.419	0.4		3474	540	0.97	0.3	1
wara Stm Rutherford Rd Br	Lower Waikato											0.765	0.765	2.76	1.5	695	0.103	0.03	0.172	0.05		4955	540	1.78	0.3	1
a Stm (Rotowaro) Sansons Br @ Rotowaro-Rd	Lower Waikato											0.7	0.7	1.19	1.19	35	0.021	0.021	0.089	0.05		1800	540	0.33	0.8	1
uru Stm Waiterimu Road Below Confluence	Lower Waikato											0.715	0.715	1.689	1.5	113	0.016	0.016	0.059	0.05		6147	540	0.73	0.4	1
gape Stm Rangiriri-Glen Murray Rd	Lower Waikato											0.004	0.004	0.69	0.69	386	0.006	0.006	0.134	0.05		584	540	3.17	0.3	1
nga Stm SH2 Maramarua	Lower Waikato											0.82	0.82	1.41	1.41	17	0.005	0.005	0.022	0.022		5098	540	0.18	0.9	1
gamarino River Jefferies Rd Br	Lower Waikato											0.625	0.625	1.842	1.5	117	0.012	0.012	0.147	0.05		4712	540	0.54	0.6	1
tangi River SH2 Maramarua	Lower Waikato											0.11	0.11	1.12	1.12	174	0.005	0.005	0.038	0.038		5567	540	0.66	0.5	1
tawhiri River Lyons Rd Buckingham Br	Lower Waikato											0.013	0.013	0.37	0.37	20	0.003	0.003	0.011	0.011		5108	540	0.08	1.6	1.6
gamarino River Island Block Rd	Lower Waikato											0.075	0.075	0.7	0.7	135	0.011	0.011	0.054	0.05		655	540	0.47	0.3	1
pipi Stm SH22 Br	Lower Waikato											3.39	2.4	5.12	3.5	99	0.006	0.006	0.081	0.05		1773	540	0.25	1.1	1.1
pa Stm SH22 Br	Lower Waikato											1.473	1	1.806	1.5	29	0.003	0.003	0.015	0.015		4667	540	0.10	0.8	1
a Stm Ponganui Rd	Lower Waikato											0.74	0.74	1.06	1.06	71	0.005	0.005	0.016	0.016		2898	540	0.73	0.6	1
a River (Waiuku) Otaua Rd Br Moseley Rd	Lower Waikato											1.369	1	2.31	1.5	32	0.021	0.021	0.135	0.05		1017	540	0.12	0.4	1
Waikato Freshwater Management Unit																												
River Mangaokewa Rd	Waipa											0.38	0.38	0.6	0.6	17	0.003	0.003	0.017	0.017		2417	540	0.18	1.5	1.6

River Otewa	Waipa											0.228	0.228	0.502	0.502	224	0.003	0.003	0.008	0.008		2036	540	1.76	2.1	2.1
River SH3 Otorohanga	Waipa											0.37	0.37	1.05	1.05	301	0.004	0.004	0.02	0.02		3289	540	0.94	1.2	1.6
River Pirongia-Ngutunui Rd Br	Waipa											0.565	0.565	1.27	1.27	977	0.008	0.008	0.023	0.023		4441	540	2.56	0.7	1
River Whatawhata Bridge	Waipa											0.673	0.673	1.319	1.319	612	0.009	0.009	0.026	0.026		3657	540	1.94	0.6	1
Stm Whatawhata/Horotiu Rd	Waipa											0.495	0.495	1.37	1.37	57	0.023	0.023	0.052	0.05		2142	540	0.19	0.6	1
haniwha Stm Wright Rd	Waipa											0.35	0.35	0.89	0.89	116	0.007	0.007	0.022	0.022		1917	540	0.53	0.9	1
piko Bowman Rd Stm	Waipa											1.369	1	2.49	1.5	592	0.022	0.022	0.076	0.03		7074	540	1.92	0.6	1
ohoi Stm South Branch Maru Rd	Waipa											0.23	0.23	0.39	0.39	2	0.003	0.003	0.008	0.008		943	540	0.05	1.6	1.6
uika Stm Te Awamutu Borough W/S intake	Waipa											0.21	0.21	0.28	0.28	4	0.002	0.002	0.003	0.003		1008	540	0.01	3.3	3.3
River Bartons Corner Rd Br	Waipa											0.65	0.65	1.28	1.28	511	0.007	0.007	0.029	0.029		2790	540	1.50	0.9	1
tutu Stm Walker Rd Br	Waipa											0.38	0.38	0.88	0.88	152	0.003	0.003	0.012	0.012		738	540	0.61	1.5	1.6
mo Stm SH31 Otorohanga	Waipa											0.52	0.52	0.83	0.83	45	0.008	0.008	0.025	0.025		1453	540	0.28	0.6	1
pu River Otorohanga	Waipa											0.86	0.86	1.36	1.36	236	0.015	0.015	0.057	0.05		4284	540	1.34	0.7	1
mo Stm Tihiroa Rd	Waipa											0.63	0.63	0.8	0.8	33	0.004	0.004	0.013	0.013		2241	540	0.23	1.1	1.6
okewa Stm Lawrence Street Br	Waipa											0.53	0.53	0.98	0.98	165	0.004	0.004	0.013	0.013		6224	540	1.87	1.4	1.6

Schedule 2 - Certification of Industry Schemes/Te Āpitihanga 2 – Te whakamana i ngā tohu o ngā Kaupapa Ahumahi

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

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

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

Assessment Criteria

A. Certified Industry Scheme System

The application must demonstrate that the Certified Industry Scheme:

~~1. Is consistent with:~~

~~a. the achievement of the water quality targets referred to in Objective 3; and~~

~~b. the purposes of Policy 2 or 3; and~~

~~c. the requirements of Rules 3.11.5.3 and 3.11.5.5.~~

2. Has an appropriate ownership structure, governance arrangements and management.

3. Has documented systems, processes, and procedures to ensure:

a) Competency assessment and checks for people who generate and subsequently monitor Farm Environment Plans in line with the relevant industry qualifications as agreed with Waikato Regional Council

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.

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

Table 3.11-1: Short term and long term numerical water quality targets for 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

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

Explanatory note to Table 3.11-1

The tables set out the concentrations (all attributes except clarity) or visibility distance (clarity attribute) to be achieved by actions taken in the short term and at 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 and 80-year 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 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_3-N/L. The short term and 80-year targets are set at 0.740 mgNO_3-N/Lto 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 target is 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 target.

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).

Upper Waikato River Freshwater Management Unit

Site	Attributes																			
	Annual Median Chlorophyll a (mg/m^3)		Annual Maximum Chlorophyll a (mg/m^3)		Annual Median Total Nitrogen (mg/m^3)		Annual Median Total Phosphorus (mg/m^3)		Annual Median Nitrate (mg NO_3-N/L)		Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
	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 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
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
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
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
Pueto Stm Broadlands Rd Br									0.450	0.450	0.530	0.530	0.003	0.003	0.009	0.009	92	92	1.8	3.0
Torepatutahi Stm Vaile Rd Br									0.500	0.500	0.800	0.800	0.002	0.002	0.011	0.011	216	216		
Waiotapu Stm Homestead Rd Br									1.257	1.0	1.563	1.5	0.112	0.03	0.176	0.05	281	281		

Site	Attributes															
	Annual Median Chlorophyll a (mg/m^3)	Annual Maximum Chlorophyll a (mg/m^3)	Annual Median Total Nitrogen (mg/m^3)	Annual Median Total Phosphorus (mg/m^3)	Annual Median Nitrate (mg NO_3-N/L)		Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
Mangakara Stm (Reporoa) SH5					1.270	1.0	1.590	1.5	0.008	0.008	0.062	0.05	1584	540	0.9	1.0
Kawaunui Stm SH5 Br					2.580	2.4	2.850	1.5	0.006	0.006	0.079	0.05	2335	540	1.4	1.6
Waiotapu Stm Campbell Rd Br					0.915	0.915	1.100	1.100	0.291	0.24	0.315	0.05	18	18	1.2	1.6
Otamakokore Stm Hossack Rd					0.740	0.740	1.190	1.190	0.006	0.006	0.024	0.024	680	540	1.2	1.6
Whirinaki Stm Corbett Rd					0.770	0.770	0.870	0.870	0.002	0.002	0.012	0.012	98	98	2.7	3.0
Tahunaatara Stm Ohakuri Rd					0.555	0.555	0.830	0.830	0.003	0.003	0.015	0.015	783	540	1.3	1.6
Mangaharakeke Stm SH30 (Off Jct SH1)					0.525	0.525	0.750	0.750	0.003	0.003	0.015	0.015	684	540	1.1	1.6
Waipapa Stm (Mokai) Tirohanga Rd Br					1.189	1.0	1.500	1.5	0.003	0.003	0.005	0.005	1147	540	1.2	1.6
Mangakino Stm Sandel Rd					0.650	0.650	0.860	0.860	0.003	0.003	0.012	0.012	251	251	1.8	3.0

Site	Attributes															
	Annual Median Chlorophyll a (mg/m^3)	Annual Maximum Chlorophyll a (mg/m^3)	Annual Median Total Nitrogen (mg/m^3)	Annual Median Total Phosphorus (mg/m^3)	Annual Median Nitrate (mg NO_3-N/L)		Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
Whakauru Stm SH1 Br					0.260	0.260	0.450	0.450	0.003	0.003	0.033	0.033	2106	540	0.8	1.0
Mangamingi Stm Paraonui Rd Br					2.760	2.4	3.120	1.5	0.091	0.03	0.296	0.05	2151	540	0.8	1.0
Pokaiwhenua Stm Arapuni - Putaruru Rd					1.680	1.0	2.040	1.5	0.002	0.002	0.020	0.020	1363	540	1.3	1.6
Little Waipa Stm Arapuni - Putaruru Rd					1.522	1.0	2.040	1.5	0.002	0.002	0.085	0.05	1377	540	1.5	1.6

Middle Waikato River Freshwater Management Unit

Site	Attributes																			
	Annual Median Chlorophyll a (mg/m^3)		Annual Maximum Chlorophyll a (mg/m^3)		Annual Median Total Nitrogen (mg/m^3)		Annual Median Total Phosphorus (mg/m^3)		Annual Median Nitrate (mg NO_3-N/L)		Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
	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	5.5	5	23	23	404	350	28	20	0.235	0.235	0.500	0.500	0.009	0.009	0.018	0.018	340	260	1.7	1.7
Waikato River Horotiu Br	6.1	5	23	23	432	350	34	20	0.260	0.260	0.530	0.530	0.007	0.007	0.029	0.029	774	540	1.4	1.6
Karapiro Stm Hickey Rd Bridge									0.520	0.520	1.689	1.5	0.008	0.008	0.031	0.031	4518	540	0.9	1.0
Mangawhero Stm Cambridge-Ohaupo Rd									1.990	1.0	2.490	1.5	0.041	0.03	0.072	0.05	2920	540	0.3	1.0
Mangaonua Stm Hoeka Rd									1.455	1.0	1.878	1.5	0.036	0.03	0.051	0.05	6372	540	1.0	1.0
Mangaone Stm Annebrooke Rd Br									2.580	2.4	2.940	1.5	0.009	0.009	0.020	0.020	2052	540	0.9	1.0
Mangakotukutuku Stm Peacockes Rd									0.800	0.800	1.788	1.5	0.077	0.03	0.132	0.05	11394	540	0.5	1.0

	Attributes													
Site	Annual Median Chlorophyll a (mg/m^3)	Annual Maximum Chlorophyll a (mg/m^3)	Annual Median Total Nitrogen (mg/m^3)	Annual Median Total Phosphorus (mg/m^3)	Annual Median Nitrate (mg NO_3-N/L)		Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
Waitawhiriwhiri Stm Edgecumbe Street					0.880	0.880	1.240	1.24	0.256	0.24	0.318	0.05	5922	540	0.4	1.0
Kirikiriroa Stm Tauhara Dr					0.815	0.815	1.572	1.5	0.096	0.03	0.183	0.05	2124	540	0.5	1.0

Lower Waikato River Freshwater Management Unit

Site	Attributes																			
	Annual Median Chlorophyll a (mg/m^3)		Annual Maximum Chlorophyll a (mg/m^3)		Annual Median Total Nitrogen (mg/m^3)		Annual Median Total Phosphorus (mg/m^3)		Annual Median Nitrate (mg NO_3-N/L)		Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
	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																				
Huntly-Tainui Br	5.9	5	19	19	562	350	43	20	0.365	0.365	0.900	0.900	0.005	0.005	0.015	0.015	1944	540	0.9	1.0
Waikato River																				
Mercer Br*	10.0	5	30	25	631	350	49	20	0.365	0.365	0.870	0.870	0.003	0.003	0.010	0.010	1494	540		
Waikato River																				
Tuakau Br*	11.3	5	37	25	571	350	50	20	0.325	0.325	0.880	0.880	0.003	0.003	0.008	0.008	1584	540	0.7	1.0
Komakorau Stm																				
Henry Rd									1.279	1.0	4.400	3.5	0.250	0.24	0.419	0.40	3474	540	0.3	1.0
Mangawara Stm Rutherford Rd Br									0.765	0.765	2.760	1.5	0.103	0.03	0.172	0.05	4955	540	0.3	1.0

Site	Attributes													
	Annual Median Chlorophyll a (mg/m^3)	Annual Maximum Chlorophyll a (mg/m^3)	Annual Median Total Nitrogen (mg/m^3)	Annual Median Total Phosphorus (mg/m^3)	Annual Median Nitrate (mg NO_3-N/L)	Annual 95th percentile Nitrate (mg NO_3-N/L)	Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
Awaroa Stm (Rotowaro) Sansons Br @ Rotowaro-Huntly Rd					0.700	0.700	1.190	1.190	0.021	0.021	0.089	0.05	1800	540	0.8	1.0
Matahuru Stm Waiterimu Road Below Confluence*					0.715	0.715	1.689	1.5	0.016	0.016	0.059	0.05	6147	540	0.4	1.0
Whangape Stm Rangiriri-Glen Murray Rd					0.004	0.004	0.690	0.690	0.006	0.006	0.134	0.05	584	540	0.3	1.0
Waerenga Stm SH2 Maramarua					0.820	0.820	1.410	1.410	0.005	0.005	0.022	0.022	5098	540	0.9	1.0
Whangamarino River Jefferies Rd Br					0.625	0.625	1.842	1.5	0.012	0.012	0.147	0.05	4712	540	0.6	1.0
Mangatangi River SH2 Maramarua					0.110	0.110	1.120	1.120	0.005	0.005	0.038	0.038	5567	540	0.5	1.0
Mangatawhiri River Lyons Rd Buckingham Br					0.013	0.013	0.370	0.370	0.003	0.003	0.011	0.011	5108	540	1.6	1.6
Whangamarino River Island Block Rd*					0.075	0.075	0.700	0.700	0.011	0.011	0.054	0.05	655	540	0.3	1.0

	Attributes													
Site	Annual Median Chlorophyll a (mg/m^3)	Annual Maximum Chlorophyll a (mg/m^3)	Annual Median Total Nitrogen (mg/m^3)	Annual Median Total Phosphorus (mg/m^3)	Annual Median Nitrate (mg NO_3-N/L)	Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
Whakapipi Stm															
SH22 Br					3.390	2.4	5.120	3.5	0.006	0.006	0.081	0.05	1773	540	1.1	1.1
Ohaeroa Stm															
SH22 Br *					1.473	1.0	1.806	1.5	0.003	0.003	0.015	0.015	4667	540	0.8	1.0
Opuatia Stm Ponganui Rd					0.740	0.740	1.060	1.060	0.005	0.005	0.016	0.016	2898	540	0.6	1.0
Awaroa River (Waiuku) Otaua Rd Br Moseley Rd					1.369	1.0	2.310	1.5	0.021	0.021	0.135	0.05	1017	540	0.4	1.0

* part sub-catchment where monitoring site falls outside the geographic area of Chapter 3.11

Waipa River Freshwater Management Unit

Site	Attributes											
	Annual Median Nitrate (mg NO_3-N/L)		Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100mL)		Clarity (m)	
	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	0.380	0.380	0.600	0.600	0.003	0.003	0.017	0.017	2417	540	1.5	1.6
Waipa River Otewa	0.228	0.228	0.502	0.502	0.003	0.003	0.008	0.008	2036	540	2.1	2.1
Waipa River SH3 Otorohanga	0.370	0.370	1.050	1.050	0.004	0.004	0.020	0.020	3289	540	1.2	1.6
Waipa River Pirongia-Ngutunui Rd Br	0.565	0.565	1.270	1.270	0.008	0.008	0.023	0.023	4441	540	0.7	1.0
Waipa River Whatawhata Bridge	0.673	0.673	1.319	1.319	0.009	0.009	0.026	0.026	3657	540	0.6	1.0
Ohote Stm Whatawhata/Horotiu Rd	0.495	0.495	1.370	1.370	0.023	0.023	0.052	0.05	2142	540	0.6	1.0
Kaniwhaniwha Stm Wright Rd	0.350	0.350	0.890	0.890	0.007	0.007	0.022	0.022	1917	540	0.9	1.0
Mangapiko Bowman Rd Stm	1.369	1.0	2.490	1.5	0.022	0.022	0.076	0.03	7074	540	0.6	1.0
Mangaohoi Stm South Branch Maru Rd	0.230	0.230	0.390	0.390	0.003	0.003	0.008	0.008	943	540	1.6	1.6
Mangauika Stm Te Awamutu Borough W/S Intake	0.210	0.210	0.280	0.280	0.002	0.002	0.003	0.003	1008	540	3.3	3.3

	Attributes											
Site	Annual Median Nitrate (mg NO_3-N/L)		Annual 95th percentile Nitrate (mg NO_3-N/L)		Annual Median Ammonia (mg NH_4-N/L)		Annual Maximum Ammonia (mg NH_4-N/L)		95th percentile *E. coli* (*E. coli*/100 mL)		Clarity (m)	
Puniu River Bartons Corner Rd Br	0.650	0.650	1.280	1.280	0.007	0.007	0.029	0.029	2790	540	0.9	1.0
Mangatutu Stm Walker Rd Br	0.380	0.380	0.880	0.880	0.003	0.003	0.012	0.012	738	540	1.5	1.6
Waitomo Stm SH31 Otorohanga	0.520	0.520	0.830	0.830	0.008	0.008	0.025	0.025	1453	540	0.6	1.0
Mangapu River Otorohanga	0.860	0.860	1.360	1.360	0.015	0.015	0.057	0.05	4284	540	0.7	1.0
Waitomo Stm Tumutumu Rd	0.630	0.630	0.800	0.800	0.004	0.004	0.013	0.013	2241	540	1.1	1.6
Mangaokewa Stm Lawrence Street Br	0.530	0.530	0.980	0.980	0.004	0.004	0.013	0.013	6224	540	1.4	1.6

Dune, Riverine, Volcanic and Peat Lakes Freshwater Management Units

	Attributes						
Lake FMU	Annual Median Chlorophyll a (mg/m^3)	Annual Maximum Chlorophyll a (mg/m^3)	Annual Median Total Nitrogen (mg/m^3)	Annual Median total Phosphorus (mg/m^3)	95th percentile *E. coli* (*E. coli*/100mL)	80th percentile cyanobacteria (biovolume mm^3/L)	Clarity (m)
	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*	80 year*
Dune	12	60	750	50	540	1.8+	1
Riverine	12	60	800	50	540	1.8+	1
Volcanic	12	60	750	50	540	1.8+	1
Peat	12	60	750	50	540	1.8+	1

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

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

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.

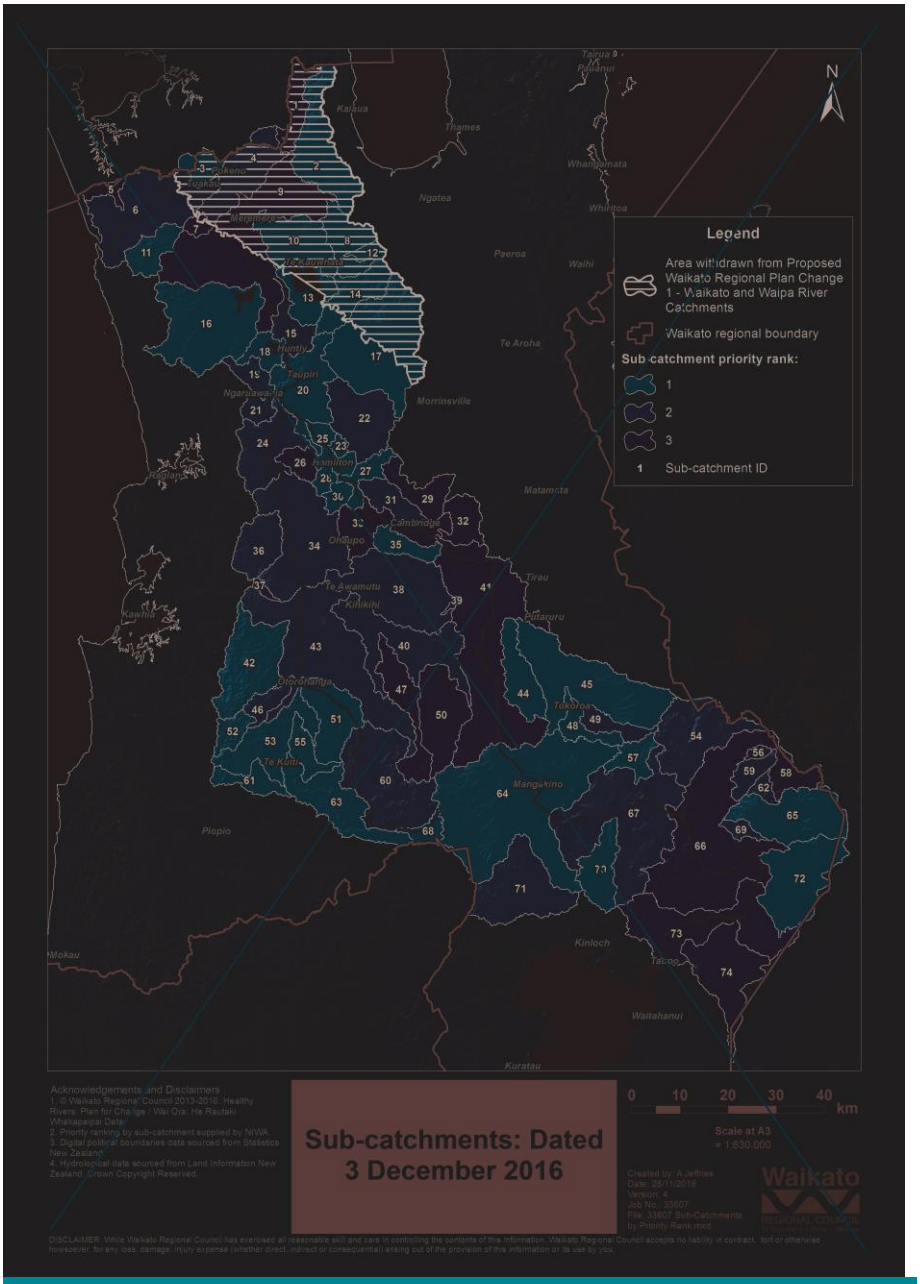
Sub-catchment identifier	Sub-catchment number	Priority
Mangatangi	2	1
Whakapipi	3	1
Whangamarino at Jefferies Rd Br	8	1
Whangamarino at Island Block Rd*	10	1
Opuatia	11	1
Waerenga	12	1
Waikare*	13	1
Matahuru*	14	1
Whangape	16	1
Mangawara*	17	1
Awaroa (Rotowaro) at Harris/Te Ohaki Br	18	1
Waikato at Huntly-Tainui Br	20	1
Kirikiriroa	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	2
Waikato at Rangiriri	15	2
Awaroa (Rotowaro) at Sansons Br	19	2
Firewood	21	2
Komakorau	22	2
Waipa at Waingaro Rd Br	24	2
Mangaone	31	2
Waipa at SH23 Br Whatawhata	34	2
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
Mangatawhiri	1	3
Awaroa (Waiuku)	5	3
Ohaeroa*	7	3
Waikato at Mercer Br*	9	3

Ohote	26	3
Mangaonua	29	3
Karapiro	32	3
Waikato at Narrows	33	3
Mangauika	37	3
Mangaohoi	39	3
Waikato at Karapiro	41	3
Mangatutu	47	3
Puniu at Wharepapa	50	3
Whirinaki	56	3
Waiotapu at Campbell	58	3
Waikato at Ohakuri	66	3
Waikato at Ohaaki	73	3
Pueto	74	3

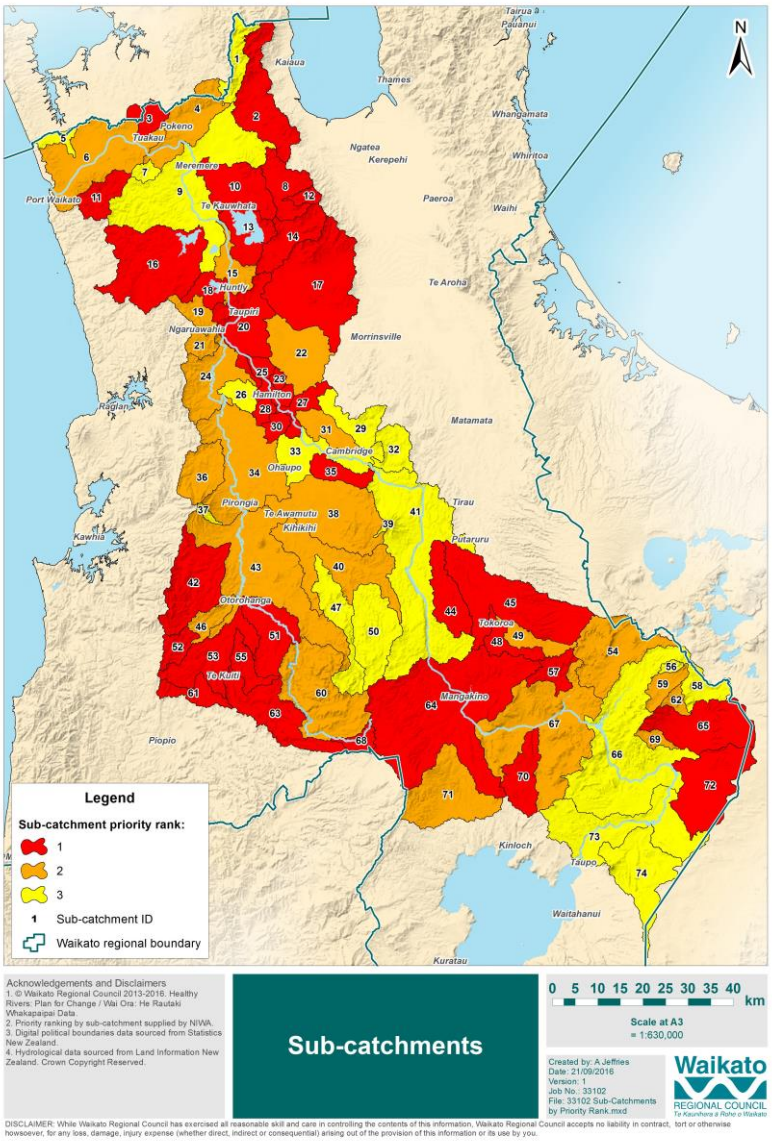
Table 3.11-2: List of sub-catchments showing Priority 1, Priority 2, and Priority 3 sub-catchments

* part sub-catchment



Picture 3.3

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



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

PART B

Insert the following Condition to section 5.1.5 of the Waikato Regional Plan after 5.1.5 (p) iii. and before the Advisory Note.

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

Insert the following terms into the Glossary in alphabetical order.

Additions to Glossary of Terms/Ngā Āpitihanga ki te Rārangi Kupu

Definition - 75th percentile nitrogen leaching value

75th percentile nitrogen leaching value: The 75th percentile value (units of kg N/ha/year) of all of the Nitrogen Reference Point values for dairy farming properties and enterprises within each Freshwater Management Unit^ and which are received by the Waikato Regional Council by ~~31 March 2019~~30 November 2020.

Definition - Arable cropping

Arable cropping: means the following arable crops:

i. grain cereal, legume, and pulse grain crops

ii. herbage seed crops

iii. oilseeds

iv. crops grown for seed multiplication for use in New Zealand or overseas

v. hybrid and open pollinated vegetable and flower seeds

and includes maize grain, maize silage, cereal silage, and mangels.

Definition - Best management practice/s

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

Definition - Catchment collective

Catchment collective: means a group of enterprises or properties in multiple ownership, where the owners of those enterprises or properties undertake farming activities and operate as a collective for the purposes of contaminant management.

Certified Farm Environment Planner (Commercial Vegetable Production)

Certified Farm Environment Planner (Commercial Vegetable Production): 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 Environment Planner (Commercial Vegetable Production) and has as a minimum the following qualifications and experience:

a. Tertiary qualifications in agronomy or agricultural engineering

b. More than 15 years' experience working with commercial vegetable cropping systems

c. A certificate of competence approved by the Waikato Regional Council relating to the relevant aspects of environmental farm plan assessment

Definition - Certified Farm Environment Planner

Certified Farm Environment Planner: 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 Environment Planner and has as a minimum the following qualifications and experience:

a. five years experience in the management of pastoral, horticulture or arable farm systems; and

b. completed advanced training or a tertiary qualification in sustainable nutrient management (nitrogen and phosphorus); and

c. experience in soil conservation and sediment management.

Definition - Certified Farm Nutrient Advisor

Certified Farm Nutrient Advisor: is a person 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~~ competencies:

a. ~~Has completed nutrient management training to at least intermediate level~~

sufficient agronomic knowledge to conduct the assessment of a budget for the farm

or enterprise, and

b. ~~Has experience in nutrient management planning~~ the appropriate level of

experience in the modelling tool utilised to develop the nutrient budget..

Definition - Certified Industry Scheme/s

Certified Industry Scheme/s: is a scheme that has been certified by the Chief Executive Officer of Waikato Regional Council and listed on the Waikato Regional Council website as meeting the assessment criteria and requirements set out in Schedule 2 of Chapter 3.11.

Definition - Commercial vegetable production

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

i. 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, parsnips, peas, puha, pumpkin, purslane, radishes, rakkyo, rhubarb, salad leaves, salsify, scallopini, scorzonera, shallots, silverbeet, spinach, spring onions, sprouted beans and seeds, squash, swedes, sweetcorn, taro, 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.

Definition - Dairy Farming

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

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 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[7]: 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 (or parts of parcels of land) held in single or multiple ownership to support the primary production activities undertaken ~~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*)[8]: 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 planted production forest or the growing of crops on land irrigated by consented municipal wastewater discharges.

Definition - Five-year rolling average

Five-year rolling average[9]: means the average of modelled nitrogen leaching losses predicted by OVERSEER® from the most recent 5 years.

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

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

9 *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*

Definition - Forage crop

Forage crop: means crops, annual or biennial, which are grown to be utilised by grazing or harvesting as a whole crop.

Definition - Good Management Practice/s

Good Management 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 livestock to cross a water body.

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[10]: A microorganism capable of inducing illness in humans.

Definition - Milking platform

Milking platform: means that area devoted to feeding cows on a daily basis during the milking season.

Definition - Nitrogen Reference Point

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

Definition - Offset/s

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

Definition - Point source discharge/s

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

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

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.

Definition - Setback

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

Definition - Stock unit

Stock unit: means an animal that eats 6,000 megajoules of metabolisable energy per year, and is illustrated in the following stocking rate table [11]:

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	6.0	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	1.0	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)	1.0	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

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

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

Subcatchment Scale Management Plan (SSMP)

Subcatchment Scale Management Plan (SSMP): means a subcatchment scale plan for that sets out actions and responsibilities for a Catchment Collective (representing all or part of a subcatchment) for the purposes of contaminant management that meets or exceeds the expected reduction in discharge to freshwater that would otherwise be achieved through a Farm Environment Plan.

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 7469 *(12)* 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, 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).

12 *Refer to Map 3.11-2.*

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PART D

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

Formatting used:

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

Operative Plan Provision	*Proposed Change*
Readers Guide	
Introduction	*Add to end second para*: Plan Change No.1 - Waikato and Waipa River Catchments (made operative on [*date*])
Abbreviations and Symbols	*Add the following alphabetically:* NPS FM National Policy Statement Freshwater Management FEP Farm Environment Plan Ha hectare FMU Freshwater Management Unit N Nitrogen P Phosphorus *E.coli Escherichia coli*
2 Matters of Significance to Maori	
2.1.1 General	*Add a new section at the end of 2.1.1:* Legislation passed in 2010 and 2012* introduced a new era of co-management for the Waikato and Waipa River catchments. Co-management provides ways for iwi to manage the rivers together with central and local government. Waikato and Waipa River iwi – Ngati Maniapoto, Raukawa, Ngati Tuwharetoa, Te Arawa River Iwi and Waikato-Tainui – and Waikato Regional Council have been partners in developing the *Healthy Rivers: Plan for Change/ Wai Ora: He Rautaki Whakapaipai* project. This project was set up to assist in achieving the *Vision and Strategy for the Waikato River/ Te Ture Whaimana o Te Awa o Waikato*. This Vision and Strategy is the primary direction-setting document for the Waikato and Waipa Rivers and focuses on restoring and protecting the health and well-being of the rivers for current and future generations.

Chapter 3.11 has arisen from the above co-management project together with the Government's National Policy Statement for Freshwater Management 2014, and specifically addresses the Waikato and Waipa River catchments.

* Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010; Ngati Tuwharetoa, Raukawa and Te Arawa River Iwi Waikato River Act 2010 and Nga Wai o Maniapoto (Waipa River) Act 2012.

3.1 Water Resources	
3.1 Background and Explanation	*Add to end of para 4:* Chapter 3.11 sets out more stringent provisions within the Waipa and Waikato River catchments to address the trend of degrading water quality. *Add new sentence as second para in section "Tangata Whenua":* The Waikato and Waipa River catchments are co-managed by the Waikato and Waipa River iwi – Ngati Maniapoto, Raukawa, Ngati Tuwharetoa, Te Arawa River Iwi and Waikato-Tainui – and Waikato Regional Council. The *Vision and Strategy for the Waikato River/ Te Ture Whaimana o Te Awa o Waikato* is the primary direction-setting document for the Waikato and Waipa Rivers and focuses on restoring and protecting the health and well-being of the rivers for current and future generations. (Refer also to CH 3.11) *Amend last sentence under "Issue and Objective":* ....the objectives are found in Chapter 3.2 – ~~3.9~~3.11 of this Plan.....
3.2 Management of Water Resources	
3.2 Water Management Classes	*Add as a new last paragraph:* Freshwater Management Units In Chapter 3.11, Fresh Water Management Units and associated water quality targets have been established for the Waikato and Waipa River catchments. Within the Waikato and Waipa River catchments, these targets are used in decision-making processes guided by the objectives in Chapter 3.11 and for future monitoring of changes in the state of water quality within the catchments. With regard to consent applications for diffuse discharges or point source discharges of nitrogen, phosphorus, sediment and microbial pathogens it is not intended, nor is it in the nature of water quality targets, that they be used directly as receiving water compliance limits/standards.
3.2.4.1 Water Management Classes	*Amend 3.2.4.1(e):* .... apply to a water body as well as policies in Section 3.11.3 for waterbodies in the Waikato and Waipa River catchments, when making decisions .... the same issue and are inconsistent particular regard....
3.3.3 Water Takes - *Policies*	
Policy 1 (c)	*Amend Policy 1(c):*

(Establish Allocation and Minimum Flows for Surface Water)	....in accordance with the policies in Chapters 3.2 and 3.11 of this Plan.
Policy 4 (f) *(Establish Sustainable Yields from Groundwater)*	*Amend Policy 4(f):* ....in accordance with the policies in Chapters 3.2 and 3.11 of this Plan.
Standard 3.3.4.28 *(How riparian planting and stock exclusion fencing shall apply)*	*Add a new advisory note:* In the Waikato and Waipa River catchments, refer also to Chapter 3.11.
3.4.5 Implementation methods – The Use of Water	
Rule 3.4.5.6 Permitted Activity Rule - Use of Water for Crop and Pasture Irrigation	*Add a new advisory note:* Subject to compliance with any specified requirements, reporting through a Farm Environment Plan is a valid means of supplying data under this rule.
Rule 3.4.5.7 Controlled Activity Rule - Use of Water for Crop and Pasture Irrigation	*Add a new advisory note:* Subject to compliance with any specified requirements, reporting through a Farm Environment Plan is a valid means of supplying data under this rule.
3.5 Discharges	
Background and Explanation	*Insert new section at end of the Background and Explanation section:* Discharges associated with Farming Land Use Chapter 3.11 addresses the use of land for farming in the Waikato and Waipa River catchments including associated diffuse.
Objective 3.5.2	*Amend Objective 3.5.2 by adding a new clause c) as follows (and consequential renumbering):* c) does not have adverse effects that are inconsistent with the objectives for the Waikato and Waipa River catchments in Section 3.11.2.

Principal Reasons for adopting the Objective	*Amend Principal Reasons for adopting the Objective:* ...outlined in Sections 3.1.2, 3.11.2 and 5.2.5 of this Plan.....
3.5.3 Policy 2(a) *Managing Discharges to Water with More than Minor Adverse Effects)*	*Amend 3.5.3 Policy 2(a):* ... with the policies in Sections 3.2.3 and 3.11.3 of this Plan....
3.5.3 Policy 4 Discharges to Land: Advisory Note	*Add a new advisory note:* In the Waikato and Waipa River catchments, refer also to Chapter 3.11.
3.5.3 Policy 5(b) *Ground Water*	*Amend 3.5.3 Policy 5(b):* ... with the policies in Sections 3.2.3 and 3.11.3 of this Plan ....
Explanation and Principal Reasons for Adopting the Policies	*Add at the end of Policy 2 para:* The cross reference to Section 3.11.3 recognises the specific water quality objectives sought to be achieved for the Waikato and Waipa River catchments through Chapter 3.11. *Add at the end of Policy 6 para.:* Chapter 3.11 addresses how water quality aspects of the Vision and Strategy will be given effect to in the Waikato and Waipa River catchments.
Rule 3.5.5.1 *Permitted Activity Rule - Discharge of Farm Animal Effluent onto Land*	*Amend opening of rule:* The point-source discharge of contaminants onto land ...
Advisory Notes to Rule 3.5.5.1 Permitted Activity Rule - Discharge of Farm Animal Effluent onto Land	*Add new bullet point:* Diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens associated with use of land for farming in the Waikato and Waipa River catchments are addressed in Chapter 3.11.
Rule 3.5.5.2 *Permitted Activity Rule - Discharge of Feed Pad and*	*Amend opening of rule:* The point-source discharge of feed pad ...

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

Treated Effluent to Water	
Advisory Notes to Rule 3.5.5.5 Discretionary Activity Rule - Discharge of Treated Effluent to Water	*Add new bullet point:* Diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens associated with use of land for farming in the Waikato and Waipa River catchments are addressed in Chapter 3.11.
Rule 3.5.5.6 Prohibited Activity Rule - Discharge of Untreated Animal Effluent	*Amend opening of rule:* The point-source discharge of untreated ...
Explanation and Principal reasons for adopting methods 3.5.5.1 to 3.5.5.6	*Add a new sentence at the end of first para:* Additional methods are provided in Chapter 3.11 to manage diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens associated with farming land uses within the Waikato and Waipa River catchments.
Rule 3.5.10.2 *Controlled Activity Rule - Take, Diversion and Discharge of Water Pumped from Existing Drainage and Flood Control Schemes*	*Add new clause (v) to Rule 3.5.10.2:* (v) In the case of the Waikato and Waipa River catchments, measures that recognise and provide for the objectives in Chapter 3.11.
3.6 Damming & Diverting	
Objective 3.6.2 (a)	*Amend Objective 3.6.2:* (a)...in Sections 3.1.2 and 3.11.2
Principal Reasons for Adopting the Objectives	*Amend first sentence:* ... in Sections 3.1.2 and 3.11.2 and for....
3.7 Wetlands	
Objective 3.7.2	*Amend the wording:*

	Refer to Objectives 3.1.2 and 3.11.2 Objective 6.
Policies 3.7.3	*Add a sentence at end of Explanation and Principal Reasons:*
Explanation and Principal Reasons	For Whangamarino Wetland refer also to Section 3.11.2 Objective 6 and Section 3.11.3 Policy 15.
Rule 3.7.4.6	*Amend advisory note first bullet:*
Advisory note	….Policy 1 of Section 3.7.3 and for Whangamarino Wetland, Section 3.11.2 Objective 6 and Section 3.11.3 Policy 15.
Discretionary Activity Rule-Creation of New Drains and Deepening of Drain Invert Levels	
Rule 3.7.4.7 Discretionary Activity Rule-Drainage of Wetlands	*Amend advisory note first bullet:* …Policy 1 of Section 3.7.3 and for Whangamarino Wetland, Section 3.11.2 Objective 6 and Section 3.11.3 Policy 15.
Explanation and Principal Reasons for Adopting Methods 3.7.4.1 to 3.7.4.7	*Amend first para:* …to achieve Objectives 3.1.2 and 3.11.2 Objective 6 ….Other methods in Chapters 3.4, 3.5, 3.6, 3.11….

3.8 Drilling	
3.8.2 Objective	*Amend Objective 3.8.2 (a):* a) … in sections 3.1.2 and 3.11.2

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

Explanation and Principal Reasons for Adopting the Policies	*Amend last sentence of last para under Policy 2:* ... Lake Taupo and Waikato/Waipa River catchments, ...as detailed in Sections 3.10 and 3.11 respectively. *Add a last sentence at end of para on Policy 3:* In the Waikato and Waipa River catchments, Rule 3.11.5.3 applies.
Rule 3.9.4.11 *Permitted Activity Rule - Fertiliser Application*	*Add opening words:* Except as otherwise provided for, or restricted by an approved Farm Environment Plan, in accordance with the provisions and requirements of Chapter 3.11, (which applies in the Waikato and Waipa River catchments)The discharge of fertiliser...
Explanation and Principal Reasons for Adopting Methods	*Add to end of first para:* For rules and methods relating to the Waikato and Waipa River catchments – refer also to provisions in Chapter 3.11. *Add to end of Method 3.9.4.7:* Refer to Chapter 3.11 for stock exclusion rules that apply in the Waikato and Waipa River catchments. *Add to middle of Method 3.9.4.10:* Apart from within the Lake Taupo Catchment and Waikato and Waipa River catchments, Waikato Regional .....
4.2 River and Lake bed structures	
4.2.2 Objective	*Amend Objective 4.2.2 (b):* ....Objectives 3.1.2 and 3.11.2.
Principal Reasons for Adopting the Objective	*Amend the para relating Part b):* ...and Objectives 3.1.2 and 3.11.2 in the Water module.
4.2.3 Policy 2 (Management of Structures)	*Amend 4.2.3 Policy 2 (b):* ...in Sections 3.2.3 and 3.11.3...
Rule 4.2.8.2 *Controlled Activity Rule - Bridges*	*Amend Rule 4.2.8.2 matter (vii):* ...Water Management Class in this Plan and in the case of the Waikato and Waipa River catchments, the relevant water quality objectives in Chapter 3.11.
Rule 4.2.8.3 *Restricted Discretionary Activity Rule - Bridges*	*Amend Rule 4.2.8.3 matter (xi*): ...Water Management Class in this Plan and in the case of the Waikato and Waipa River catchments, the relevant water quality objectives in Chapter 3.11.

Rule 4.2.9.3 *Controlled Activity Rule - Culverts for Catchment Areas Not Exceeding 500 Hectares*	*Amend Rule 4.2.9.3 matter (xii):* ...Water Management Class in this Plan and in the case of the Waikato and Waipa River catchments, the relevant water quality objectives in Chapter 3.11.
Rule 4.2.10.1 *Permitted Activity Rule - Discharge and Intake structures*	*Amend Rule 4.2.10.1 condition (n):* ...Water Management Classes in Section 3.2.4 of this Plan and in the case of the Waikato and Waipa River catchments, the relevant water quality objectives in Chapter 3.11. .
Rule 4.2.11.2 *Restricted Discretionary Activity Rule - Fords*	*Amend Rule 4.2.11.2 matter xi):* ...Water Management Classes in this Plan and in the case of the Waikato and Waipa River catchments, the relevant water quality objectives in Chapter 3.11.
Rule 4.2.16.1 Controlled Activity Rule - Channel Training Structures	*Amend Rule 4.2.16.1 matter (xi):* ...Water Management Classes and in the case of the Waikato and Waipa River catchments, the relevant water quality objectives in Chapter 3.11.
Rule 4.2.20.3 *Controlled Activity Rule - Removal or Demolition of Structures*	*Amend Rule 4.2.20.3 matter (x):* ...Water Management Classes in Section 3.2.4 of this Plan and in the case of the Waikato and Waipa River catchments, the relevant water quality objectives in Chapter 3.11.
4.3 River and Lake Bed Disturbances	
4.3.1 Issue 4	*Amend 4.3.1 Issue 4 (c):* ....inconsistent with Chapters 3.1 and 3.11
4.3.2 Objective	*Amend Objective 4.3.2 (b):* ...with objectives in Chapters 3.1 and 3.11 *Amend Objective 4.3.2 (l):* ...with objectives in Chapters 3.1 and 3.11

Principal Reasons for Adopting the Objective	*Amend para relating to Part b):* ... objectives in Chapters 3.1 and 3.11 of this Plan *Amend para relating to Part l):* ... in Chapters 3.1 and 3.11
4.3.3. Policy 1 (Bed and Bank Alterations and Extraction of Sand, Gravel and Other Bed Material)	*Amend 4.3.3. Policy 1 (b):* ...in Section 3.2.3 and the objectives in Section 3.11.2, or....
4.3.3 Policy 3 (Clearance of Vegetation)	*Amend 4.3.3 Policy 3 (a):* ...in Chapters 3.2 and 3.11
Explanation and Principal Reasons for Adopting the Policies	*Add to the end of the paragraph relating to Policy 4:* For the Waikato and Waipa River catchments, regulatory provisions are set out in Chapter 3.11.
Method 4.3.5.3 *Livestock access*	*Add a new first sentence:* The Waikato and Waipa River catchments are excluded from this method and are addressed in Chapter 3.11.
Rule 4.3.5.4 *Permitted Activity Rule - Livestock on the Beds and Banks of Priority One Water Bodies*	*Amend opening words of Rule 4.3.5.4:* ...any water body within the Waikato and Waipa River catchments or any water body mapped in the .....
Rule 4.3.5.4 *Advisory Note*	*Add a new first bullet point:* • Controls on livestock in the Waikato and Waipa River catchments are set out in Chapter 3.11.
Rule 4.3.5.5 *Discretionary Activity Rule - Livestock on the Beds and Banks of Priority One water Bodies*	*Amend opening words to rule 4.3.5.5:* ... Livestock Exclusion Area where that Livestock Exclusion Area is outside the Waikato and Waipa River catchments:
Rule 4.3.5.5	*Add a new first bullet point:*

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

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

5.1.4.11	*Add new advisory note:*
Permitted Activity Rule - Soil Disturbance, Roading and Tracking and Vegetation Clearance	With regard to the clearance of vegetation or planted production forest in the Waikato and Waipa River catchments, note that subsequent land use may be regulated by Rule 3.11.5.7.
5.1.4.12	*Amend opening statement:*
Permitted Activity Rule - Soil Cultivation Adjacent to water Bodies	Except as controlled by rules 7.2.6.1 and 7.2.6.2, or in the Waikato and Waipa River catchments, as required by rule 3.11.5.2, or by an approved Farm Environment Plan developed under Rules 3.11.5.3 or 3.11.5.4 or 3.11.5.5, soil cultivation not less than...
5.1.4.13	*Add to the beginning of Clause 2:*
Discretionary Activity Rule - Soil Disturbance, Roading and Tracking and Vegetation Clearance	Except as allowed by an approved Farm Environment Plan developed under rules 3.11.5.3 or 3.11.5.4 or 3.11.5.5, Ssoil cultivation... *Add new advisory note:* With regard to the clearance of vegetation or planted production forest in the Waikato and Waipa River catchments, note that subsequent land use may be regulated by Rule 3.11.5.7.
5.1.4.14	*Add an advisory note:*
Controlled Activity Rule - Soil Disturbance, Roading and Tracking and Vegetation Clearance, Riparian Vegetation Clearance in High Risk Erosion Areas	With regard to the clearance of vegetation or planted production forest in the Waikato and Waipa River catchments, note that subsequent land use may be regulated by Rule 3.11.5.7.
5.1.4.15	*Add an advisory note:*
Discretionary Activity Rule - Soil Disturbance, Roading and Tracking and Vegetation Clearance, Riparian Vegetation	With regard to the clearance of vegetation or planted production forest in the Waikato and Waipa River catchments, note that subsequent land use may be regulated by Rule 3.11.5.7.

Clearance in High Risk Erosion Areas	
Explanation and Principal Reasons for Adopting Methods	*Add to end of para that deals with Method 5.1.4.5:* Within the Waikato and Waipa River catchments, there are policy and regulatory provisions that require the development of Farm Environment Plans for some land uses (refer Chapter 3.11). *Add to end of para that deals with Method 5.1.4.9:* A regulatory approach has been introduced for the Waikato and Waipa River catchments in Chapter 3.11.
5.2 Discharges onto or into land	
Integration with Water and Air Management	*Add to para 3:* ...discussed in Chapters 3.5 and 3.11.
5.2.2 Objective	*Amend clause b):* ...in Section 3.1.2 or the objectives for the Waikato and Waipa River catchments in Section 3.11.2.
5.2.3 Policy *2 Other Discharges Onto or Into Land*	*Amend 5.2.3 Policy 2(b):* ...in Sections 5.1.3 and 3.11.3 *Amend 5.2.3 Policy 2(c):* ... in Section 3.2.3 3 or in the Waikato and Waipa River catchments, the water quality objectives in Section 3.11.2
Explanation and Principal Reasons for adopting Methods 5.2.5.1 to 5.2.5.8	*Add as a last sentence to the opening paragraph:* For activities in the Waikato and Waipa River catchments, refer also to the objectives and policies in Chapter 3.11.
5.3 Contaminated Land	
Objective 5.3.2	*Amend clause b):* ...in Sections 3.1.2 and 3.11.2
Principal Reasons for adopting the Objective	*Amend 3rd para:* ....in Chapters 3.1, 3.11 and 6.1.
Glossary of Terms	

property

Amend definition of "property":

For the purposes of Chapters 3.3, ~~and~~ 3.4 and 3.11 means one or more allotments contained in single certificate of title, and also includes all adjacent land that is in the same ownership but contained in separate certificates of title. For the purpose of Rules 3.11.5.3 and 3.11.5.4, a property is considered to be within a sub-catchment if more than 50% of that property is within the sub-catchment.

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APPENDIX 3: A catchment collective approach to managing contaminants

A catchment collective approach to managing contaminants: Variation 1 to Waikato Healthy Rivers PC1 22 May 2018

Background:

The Horticulture New Zealand submission on PC1 contains elements supporting a catchment collective approach. This short paper and attached diagram explains how it may work. It has been prepared initially to engage with growers to establish support for the approach but is designed to be applicable to any business affected by; and responsible for outcomes sought under proposed Healthy Rivers PC1.

Basic outline of approach:

1. The Waikato is split into subcatchments under PC1. HortNZ has proposed a table of subcatchment loads based on the science provided by the Technical Working Group to the Collaborative Stakeholder Group process (CSG). *These subcatchment loads provide an opportunity to manage the responsibility for contaminants at the subcatchment scale, as opposed to individual farms*. It allows for the community to manage effects collectively and take advantage of shared responsibility to increase the flexibility of land use activity.
2. It will be very hard to get all businesses in a subcatchment to agree to work collectively so it is *proposed that a minimum of 20% of the land area would be required to start a collective approach. The responsibility for achieving subcatchment load targets could then be divided proportionately*. See the footnote below for the proposed method to undertake the reallocation of responsibility.[1]
3. This approach *requires the formation of a legal entity responsible* for managing things. The relationship between the legal entity and those represented by the entity would be supported by a contract under civil law outlining the rights and responsibilities of each party.
4. Funding will be required to establish a collective approach, because the legal entity will have to establish a tool and methods to track progress and support the development of an Integrated Catchment Management Plan (ICMP) by parties involved. *Funding responsibility will need to be managed by the civil contract between the legal entity and the other parties*.
5. *A decision support tool must be developed*. This tool is basically a catchment model that is capable of predicting the effectiveness of identified actions or mitigations to achieve the ten-year subcatchment load targets specified in the plan. A minimum standard for decision support tools is specified in the HortNZ submission. At a minimum they must be able to assess the outcome and probable reductions across all four contaminants. The decision support tool must be:
    a. able to be used by the Council as part of managing the overall Waikato River
    b. able to provide evidence to support a package of mitigation actions specified in an ICMP
    c. developed and approved by respectable scientists approved to do so.
    d. Able to continuously improve as better information becomes available from monitoring
6. The legal entity will *use the ICMP and decision support tool to apply for an integrated consent covering the land specified in civil contracts agreed by participating parties.* The

[1] The legal entity could receive a proportion of the relevant subcatchment load limit, that would be calculated by the decision support tool. The limit allocated to the legal entity could be based on the area of land and the proportion of the relevant subcatchment load targets (estimated in HortNZ submission Schedule 1C Table XX).

consent would cover enough time to allow for improvements to be measured and would reflect the investment in the decision support tool and the package of mitigations.

7. The legal entity would be *required to monitor and report progress under the ICMP to the Council who would be able to take any required enforcement action against either the legal entity or parties that have breached conditions of contract*. The consent could be reviewed and altered if the targets are not being achieved; or if the targets are being achieved quicker than expected.

Pros and Cons of the proposed approach

Council		Participating parties	
Pros	Cons	Pros	Cons
The Council will have a greatly reduced group of consent holders and farm plans to manage.	The Council will need to develop a strong relationship with the subcatchment communities and support the development of catchment collectives.	The parties to a catchment collective will have support to manage mitigations and actions and report progress to Council.	The parties will have to agree to pay a fair share of the development and consenting costs incurred by the legal entity.
The Council will benefit from the development of decision support tools to monitor the River. These tools will allow far more sophisticated approaches to be taken in the longer term.	The Council will be required to invest in a framework that can manage all of the subcatchment based tools as an integrated tool to manage the entire Waikato River. This will require investment in science, data and information handling.	Farm Plans will be far more tailored to individual properties and the contaminants of concern to achieve the best results for the best price.	The establishment of a legal entity under contract among many parties will be complex and difficult to achieve. It will require the community to work together in a way they have not before. This will require some support from the Council.
The Council can obtain greater benefit in terms of positive water quality outcomes because a wider range of effective mitigations become available by working collectively at an enterprise level as opposed to a property level.	The Council will require the ability to manage a more sophisticated set of mitigation packages, alongside the community that choses not to participate in a catchment collective. For this reason the allocation regime should incentivise catchment collectives.	Commercially confidential information required to assess load reductions will not enter the public realm unless enforcement action is required by the Council. The rest of the information can be managed by the legal entity that is not subject to LGOIMA.	Any allocation of contaminants will be allocated to the entity not to any party within the collective. Procedures will have to be established for new parties entering or old parties leaving the collective.
Council and Iwi will have a range of resourced legal entities to work with on progressing achievement of the Vision and Strategy for the Waikato River		The flexibility to change land use will be increase between participants in the catchment collective, because the discharge outcomes a can be assessed and managed in a far more effective and sophisticated way.	No party will be able to abdicate their responsibility for undertaking improvements. They will have greater flexibility to manage how improvements are achieved though.

Diagram showing how the proposed collective sub catchment approach would work

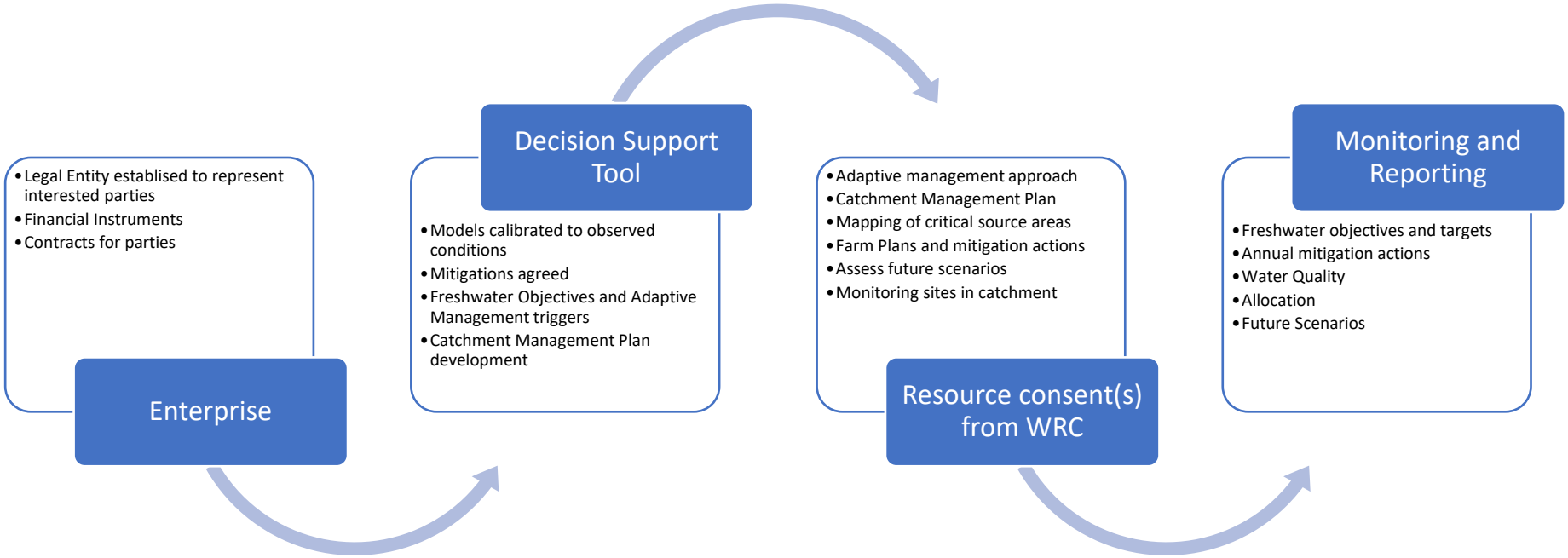
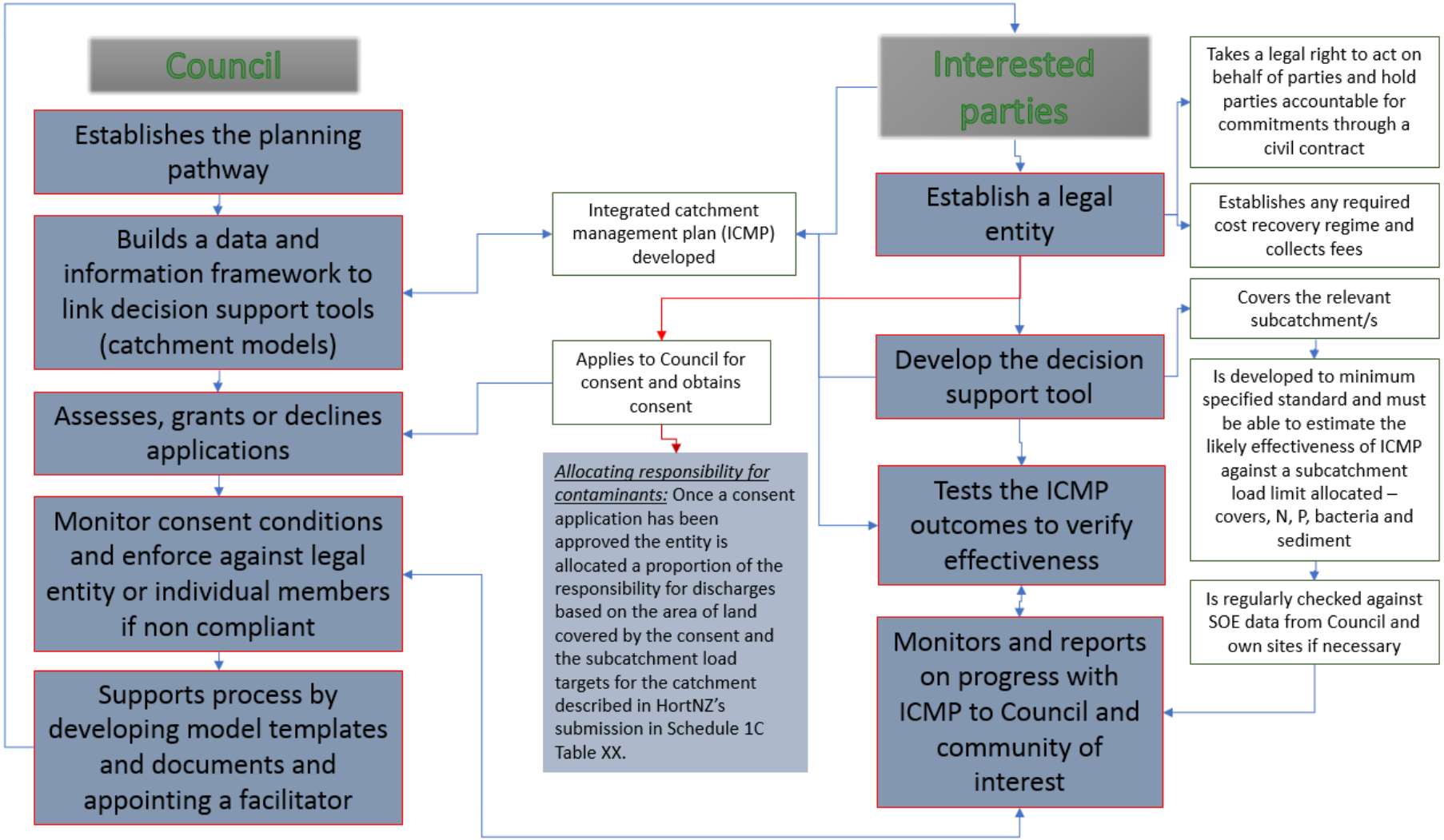


Diagram showing the relationship with Waikato Regional Council for Catchment Collective approach



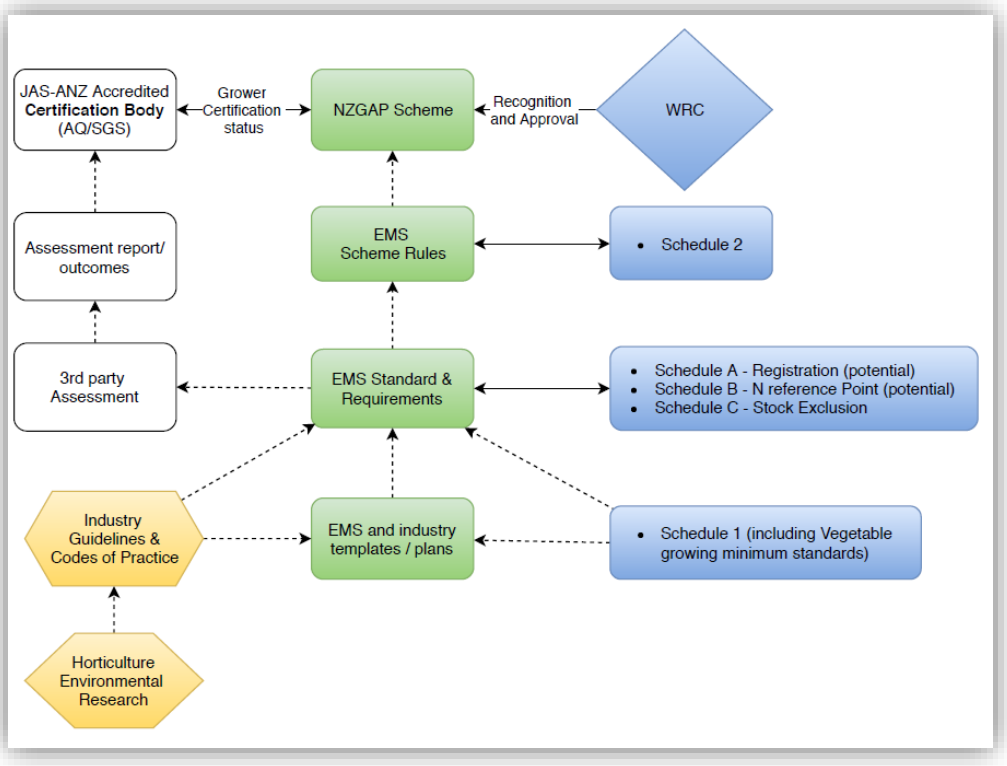
APPENDIX 4: PC1 implementation feedback

Good Agricultural Practice (GAP) scheme /Independently Audited Self–Management (GAP) Scheme

Good Agricultural Practice (GAP) schemes provide assurance for the safe and sustainable production of fruits and vegetables in New Zealand. Growers who meet the GAP assurance standards are able to demonstrate that required practices are in place for the production of New Zealand fresh produce to meet regulatory and market requirements – so customers can buy with confidence.

1. GAP standards in NZ horticulture are benchmarked to internationally recognised standards including GLOBALG.A.P. Integrated Farm Assurance (IFA), standard version 5.1.
2. GAP schemes are outcomes focused and operate within a risk-based integrated quality systems approach.
3. All certified growers are independently audited by JAS-ANZ accredited certification bodies, and they must continuously meet requirements of GAP standards to maintain certification.
4. Certified growers are required to provide a significant amount of evidence of their practices during the audit process including records, certificates, documentation and observations.
5. New Zealand GAP (NZGAP) is an assurance scheme which has developed an environmental add-on to enable growers to manage regional council requirements for Good Management Practice (on Soil, Nutrient, Irrigation and Waterbody Management) alongside their usual NZGAP audit.
6. The NZGAP add-on is an environment management system (EMS) which enables growers to systemise complex environmental issues by mitigating identified risks with appropriate control measures found in industry guidelines and codes of practice.
7. The EMS and industry guidance is based on New Zealand horticulture growing systems.
8. The EMS, industry guidelines and codes of practice are periodically updated with new information and mitigations based on the latest relevant environmental research.

NZGAP Environment Management System (EMS) add-on assurance framework aligned with requirements for WRC Healthy Rivers



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22 March 2018

To whom it may concern,

Horticulture New Zealand Feedback on Waikato Regional Council FEP Template and Guidelines

Thank you for the opportunity to provide feedback on the final draft of the Waikato regional council FEP Template and Guidelines developed for Healthy Rivers Plan Change 1 (PC1). It is noted that both the Template and Guideline is significantly changed from the version circulated late 2017 and that due to the tight timeframe for feedback, our comments are in the main generic rather than specific.

We also note that some of the detail will possibly change through the 1st Schedule process and therefore have not focussed on this. We presume there will be further opportunities for feedback once the 1st Schedule process is completed.

FEP Template

The FEP template is quite generic which is positive in that any landowner who is required to complete a FEP should be able to comply with this template. Horticulture New Zealand (Horticulture NZ) has been reluctant to develop an industry specific FEP as each one will need to be tailored and managed for each regions requirements.

Currently Horticulture NZ would prefer that a regionally developed FEP such as this one, is suitable for our growers to comply with the regional requirements.

We note that the NZGAP EMS checklist could be considered a FEP. However, it has a different structure and operates at a less prescriptive level for auditing and reporting purposes.

For example:

- FEP question: Description of how soil type and land use contributes to contaminant loss risk
    - Narrative answer
    - In the action plan, mitigations can be selected from a drop down or free text which again is prescriptive

- NZGAP question: Have whole farm assessments and paddock/block assessments for risks of soil erosion and sediment loss been completed?
    - Yes/ No answer based on evidence supplied to auditor. Risk assessment based on industry guidance – Erosion and sediment control templates
    - NZGAP doesn't collect detailed information on risks or mitigations

The majority of the template will be narrative. While this allows an approach that meets the needs of the farmer, style of the CFEP and requirements of PC1, at an individual level we consider this will create a significant workload for Council and auditors.

Horticulture NZ growers are already required to comply with NZGAP, which has a different approach to getting a similar outcome as proposed by Council. Having to undertake an additional process for the same outcome is unnecessary and overly onerous for growers.

NZGAP has a greater reliance on its auditors who provide a 'yes/no' answer on the audit that the risk has been appropriately addressed. NZGAP doesn't collect detailed information on risks or mitigations, but rather focusses on assuring that risks have been identified and managed appropriately based on the latest industry codes of practice.

It is also noted that there is information being requested or at least identified in the FEP over and above what is required in Schedule 1. While we understand that this information is often useful to the farmer or grower in managing their property, we consider that it should be clearly identified what information is a regulatory requirement of PC1 and what is optional.

Guidance

Horticulture NZ supports the risk and action-based approach as it is much clearer how to identify and prioritise actions. However, we note the guidance isn't overly relevant for Horticulture NZ growers as it is predominantly pastoral based. We acknowledge that we have not supplied specific detail around risks and mitigations associated with horticultural production systems that would address this issue. Horticulture NZ would like to discuss the following with Council;

- If growers are to use this FEP to meet PC1 requirements that it can include risks, mitigations, actions that reflect the horticultural sector.

- To minimise costs and time for growers, we consider that NZGAP auditing should also be able meet PC1 requirements. To do this, there not only needs to be a reasonable alignment between the FEP and NZGAP but also agreement on process of auditing the FEP.

Lucy Deverall

Environmental Policy Advisor, Natural Resources and Environment

Horticulture New Zealand

Memorandum

Date:	14 February 2018
Subject:	Draft Certified Industry Scheme Principles
From:	Lucy Deverall
Company:	Horticulture New Zealand
To:	Hamish Smith
Company:	Waikato Regional Council

Purpose

The purpose of this memo is to provide comment on the draft Certification Industry Scheme Principles proposed by Waikato Regional Council as part of Proposed Plan Change 1.

Comment:

- There is a general theme through the principles which places emphasis on data collection rather than on the assessment and performance of CIS's whose role is intended to be outcome focused with high-level reporting.
- The WRC has identified four key contaminants of interest, yet nitrogen is the only contaminant specifically identified within the CIS principles. This focus on nitrogen within the principles is unjustified but also irrelevant as the purpose of the principles should be manage quality control and assess the performance of scheme bodies, rather than on data collection as mentioned above.
- Competency, auditing and calibration aspects will need to be relevant to horticultural requirements, rather than purely pastoral focused.
- The naming of individual CFEP's for larger scheme's is impractical. HortNZ suggests the naming of relevant certification bodies be required instead.
- HortNZ is concerned about the requirement for reporting documents to be made public given the economic sensitivity of data. Clarification is sought on the level of detail anticipated to be publicly available.
- The term "equivalency" between CIS FEP's and non-CIS FEP's should be applied to enable equivalency between FEP's and other tools.
- Amend the term "farmer" to "landowner" to futureproof the use of the scheme approach to be applied in other scenarios.

- The principles should also provide guidance on:

    - what enforcement action can be undertaken against a non-compliant scheme by the Council
    - the deregistration process for substandard CIS's
    - the fate and compliance status of members of a defunct CIS including some detail of the pathway back to compliance through the rule structure.

APPENDIX 5: Snapshots of a commercial vegetable rotation

Figure 1 illustrates a typical crop rotation for a commercial vegetable operation within the Lower Waikato. The image illustrates the main crops and how they change in type and extent from year to year. In this example, each crop is typically grown over a 4-8-month period, with the balance of the year being in fellow or covered crop. The nitrogen leaching for this operation will vary from year to year due to the different crops and extents.

The spatial and temporal variability of commercial vegetable growing needs to be accounted for in the plan provisions, both in determining average leaching rates over time and to ensure the plan provisions provide for sufficient flexibility for growers to rotate their crops into new parcels of lease land, which may not have been used for commercial vegetable growing in the past.

Figure 1 Snapshots of a commercial vegetable rotation, over four years