

BEFORE THE HEARINGS PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of proposed Plan Change 2 to the One Plan

AND

IN THE MATTER of the submissions and further submissions
set out in the s 42A Officer Report

**SECTION 42A REPORT OF CHRISTINE FOSTER
ON BEHALF OF MANAWATU-WHANGANUI REGIONAL COUNCIL
PLANNING
4 SEPTEMBER 2020
(VOLUME 1)**

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Executive Summary

- i. This report sets out the relevant Resource Management Act 1991 (“**RMA**”) considerations for the Hearing Panel’s decision-making on submissions to proposed Plan Change 2 (“**PC2**”). It is prepared under the provisions of section 42A of the RMA, and assesses information provided in the submissions on PC2 to the Manawatu-Whanganui One Plan. I refer to the report as the Section 42A Report.
- ii. At the outset, the Section 42A Report provides an overview of the One Plan provisions for management of intensive farming land use (“**IFLU**”) activities and the issues that have emerged in the implementation of those provisions that led to PC2 being promulgated. The Section 42A Report also sets out the process and timeline of the development of PC2 and the process adopted by Horizons and submitters in preparing for the hearing before the Hearing Panel in October.
- iii. The issues raised in submissions are addressed in topic groups, reflecting the similarity of concerns or of relief requested by many submitters. The analysis of submissions is contained in Chapters 6 to 23 of the Report. The Report makes recommendations on whether to accept, accept in part or reject individual submission points. These recommendations are contained in **Attachment E.1**.
- iv. The Section 42A Report also recommends substantive amendments to the PC2 provisions. These are detailed in **Attachments G, H, J, K, L, M, N and O**. Some of the submissions make valid points about improvements that can be made to the PC2 provisions, particularly around the ability for further certainty in the consenting process for existing IFLU activities. The amendments recommended in this Section 42A Report address certainty of outcome for existing IFLU businesses, certainty of outcome in terms of the scale of N leaching that could be authorised through resource consents under the One Plan, and certainty around the time frame within which farm system improvements (and N leaching reductions) must be achieved.
- v. A section 32AA evaluation of the proposed amendments to the PC2 provisions is provided in Chapter 24 of the Report. The amendments proposed are detailed and extensive. This reflects the helpful detail that was provided in submissions and the breadth and validity of issues raised.
- vi. The Section 42A Report recommends that PC2 be confirmed – not withdrawn as requested by some submitters. Diffuse N leaching from land use, including from IFLU activities, is identified as a contributor to the degradation of surface water and groundwater in the region. The One Plan’s original, clearly stated, intention is that all existing IFLU activities would be regulated to effect widespread improvement in farming and growing practices and contribute to reducing N loads in water bodies. There are also significant equity imbalances in a rural sector where some existing IFLU

activities have absorbed the capital and operating costs of obtaining resource consents, while others have either avoided or been prevented from, obtaining resource consent by the issues within the framework regulating IFLU that do not meet Table 14.2.

- vii. The currently unconsented IFLU activities need to be regulated to fulfil the original One Plan intention. If all remaining unconsented IFLU activities obtain consents and reduce their N leaching, the contribution to reducing N contamination in surface water and groundwater is predicted to be small. However, that was always the expectation when the One Plan first became operative. It is also still an improved outcome on the alternative of no regulation at all (the pre-regulation scenario). The overall strategy for water quality improvement intends that all contributors will, over time, do their bit to improve water quality. The converse, whereby no industry sector makes any change to nutrient management practices simply because the impact is so slight, would mean ultimately no gains in water quality. This would not be a responsible approach in my opinion.
- viii. PC2 is an interim initiative. Horizons has underway a wider review of the effectiveness of the One Plan and of what is required to 'give effect to' (implement) the National Policy Statement for Freshwater Management 2020 (NPS-FM). The provisions of PC2 will, naturally, be revisited in that process. That wider review must conclude with a publicly notified replacement freshwater plan no later than 31 December 2024. The Section 42A Report concludes that, even for that short period, a workable regulatory framework for existing IFLU activities would make a small difference.
- ix. The PC2 provisions, once settled, will prevail throughout the course of the wider review until a new freshwater Plan becomes operative. That process will take years. The period of influence of PC2 is not just the next four years – it is the period until Horizons and the Manawatū-Whanganui community settles on the replacement One Plan provisions. This section 42A Report concludes that the responsible approach, in light of the significance of the need for water quality improvement and for certainty for existing IFLU activities, is to continue with PC2 and refine it in the best way possible to make the operative One Plan as effective as practicable for that interim period.

1 Introduction

1.1 Report Purpose

1. The Section 42A Report is prepared in accordance with Section 42A of the RMA for Manawatu-Whanganui Regional Council ("**Horizons**"). Its purpose is to set out the relevant RMA considerations for the Hearing Panel's decision-making on submissions to PC2, to provide a summary and analysis of the submissions made on PC2, and to make recommendations whether to accept or reject the relief sought in those submissions.
2. The Section 42A Report:
 - (a) provides an overview of the One Plan provisions for management of intensive farming land use activities and the changes to those proposed by PC2;
 - (b) summarises the steps taken in the development of PC2;
 - (c) sets out the relevant statutory framework;
 - (d) discusses the issues raised and relief requested in submissions;
 - (e) recommends amendments to PC2 to address matters raised in submissions (where achievable within the scope of PC2 and the submissions); and
 - (f) recommends whether to accept, accept in part, or reject the submissions.

1.2 Report Authors

3. The primary author of this report is Christine Foster, assisted by Lynette Baish and Melanie McCormick. **Attachment A1** contains our statements of qualifications and experience, which include our stated commitment to abide by the Code of Conduct set out in the Environment Court's 2014 Practice Note (including Part 7).

1.3 Relationship to Other Section 42A Reports

4. The recommendations within this Section 42A Report have been informed by additional section 42A reports on technical matters filed by the following witnesses:
 - (a) General Overview and Introduction to Plan Change 2 - Dr Nic Peet, Group Manager Strategy and Regulation, Horizons;

- (b) Water Quality - Abby Jane Matthews, Water Quality Scientist and Manager Science and Innovation, Horizons;
- (c) Water Quality and Scenario Analysis - Dr Antonius Hugh Snelder, Water Quality Scientist and Director, Land Water and People Environmental Limited;
- (d) Water Quality Modelling and Scenario Analysis - Dr Timothy Jason Cox, Water Resources Engineer and Scientist, Streamlined Environmental and CDM Smith;
- (e) On-Farm Management Practices - Associate Professor Dave John Horne, Massey University;
- (f) Impact of overseer version change - Dr James Anthony Hanly, Massey University;
- (g) Costs of Changes in Nitrogen Leaching Maxima - Terry Graham Parminter, Agricultural Consultant;
- (h) GMP and Overseer Modelling for Commercial Vegetables - Dr Anne-Maree Jolly, Rural Environmental Consultant;
- (i) Farm Scale Cost Impact Assessment - Stephen McNally, Manager Primary Industries;
- (j) Macro-Economic Impacts - Peter Clough, Senior Economist, NZIER; and
- (k) Social Impact Assessment - Heather Mildred Collins, Facilitator and Rural Social Scientist, Heather Collins Consulting.

1.4 Content and Structure of Report

- 5. This report comprises the following:

Chapter 2

- 6. Provides the context for PC2, summarising:
 - (a) the operative One Plan approach to managing IFLU activities in the Manawātū Whanganui region ("**the Region**");
 - (b) the issues arising from implementation of the One Plan IFLU activities;

- (c) expert advice received by Horizons, following the declaration decision, on the effectiveness and efficiency of the One Plan IFLU provisions;
- (d) the issue PC2 is attempting to address;
- (e) the purpose of PC2; and
- (f) a summary of the changes proposed by PC2.

Chapter 3

- 7. Sets out the process and timeline of the development of PC2 and the process adopted by Horizons and submitters in preparing for the hearing.

Chapter 4

- 8. Sets out the relevant statutory framework provided by the RMA, the higher order planning instruments (including the relevance of the 2020 NPS-FM and NES-FM) and other matters relevant to the Hearing Panel's decision-making.

Chapter 5

- 9. Summarises the issues raised in submissions, grouped by topic, recognising that there are strong similarities between some submissions.

Chapters 6 to 23

- 10. Provide an analysis of the issues from submissions, further grouped by relief requested or sub-topic, and includes commentary on which aspects of submissions are considered to be within or beyond the scope of PC2, as well as recommendations as to whether to accept or reject submissions, and suggested wording of amendments to PC2 that may address the submissions. Each chapter begins with a table summarising the submissions and further submission points relevant to the chapter topic, set out as follows (the example submissions shown are not real but are for illustration only):

Submitter	Sub No.	Summary of Requested Relief:	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
e.g. Joanne Smith	99.1	The submitter requests that PC2 be withdrawn	Buzz O Bumble (FS55.99.1)	Pro-PC2 Inc. (FS88.99.1)

e.g. John Smith	100	The submitter supports PC2 and requests that it be confirmed	Pro-PC2 Inc. (FS88.100.1)	Buzz O Bumble (FS55.100.1)
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11. These tables illustrate the numbering system adopted. Wherever practicable, submission point numbers have been assigned to all of the requested relief in a submission (e.g. 99.1 in the above example). The further submissions are assigned a number (e.g. FS55 or FS88 in the example above) and the numbering refers to the submission each further submission point relates to. For example, FS55.99.1 shown above is the further submission point of further submission number 55 on submission point number S99.1.
12. In many cases, though, submissions have not been divided into submission points – in which case, the tables will simply show the submission number and describe the issue raised by that submission (e.g. submission no. 100 in the above example). This comes about because the published summary of submissions focuses on relief requested, whereas many submissions raise relevant issues separate from the relief requested. This report endeavours to report on all relevant issues, not just relief requested.

Chapter 24

13. Gathers the suggested amendments recommended in preceding chapters and provides a section 32AA evaluation of those amendments and presents an overall conclusion.

Volume 2

14. Includes the attachments to the Section 42A Report. The report authors anticipated that it may be useful for readers to be able to read the attachments, separately, at the same time as the content of the following chapters – hence the two separate volumes.
15. Attachments are numbered according to the report chapter they relate to. For example, the attachment for Chapter 1 is in Part A of Volume 2 and numbered A1.

1.5 Recommendations on Submission Points

16. My recommendations on all submission points and further submission points are contained in the table in **Attachment E1**. The table is organised as follows:

Submission Number	Submitter	Support/ Oppose	Decision Requested	PC2 Provision	Recommendation	S. 42A Report Chapter
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17. The Recommendation column contains the officers' recommendation (accept, accept in part, or reject). The far-right column specifies the chapter of the Section 42A Report the submission points are discussed in. Support or opposition by submitters are denoted by 'S' (support), 'O' (opposed), 'SIP' (support in part) or 'OIP' (opposition in part).
18. The recommendations made in this report are informed by the PC2 Section 32 Report and supporting technical reports, the submissions and further submissions, the joint witness statements resulting from expert conferencing, and the section 42A reports listed above. However, I am yet to read or hear the evidence of submitters. The recommendations contained in this report should therefore be considered as preliminary recommendations, subject to the presentation of submitters' evidence to the Hearing Panel. I will revisit my recommendations once the submitters' evidence is available with a view to providing updated recommendations, as necessary, for the Hearing Panel.
19. The conclusions and recommendations made in the Section 42A Report are not binding on the Hearing Panel. They represent the views of the primary author of the Section 42A Report. The Hearing Panel will make its own recommendations as to the relief sought by submitters, before the Council makes the ultimate decisions on PC2.

1.6 Relevant One Plan Definitions

20. The following definitions are particularly relevant in considering PC2:

Commercial vegetable growing means using an area of land greater than 4 ha for producing vegetable crops for human consumption. It includes the whole rotational cycle, being the period of time that is required for the full sequence of crops, including any pasture phase in the rotation. Fruit crops, vegetables that are perennial, dry field peas or beans are not included.

Common catchment expiry or review date means the date set in Table 12.1 when all consents within a Water Management Zone* are to be reviewed or to expire.

Cropping means using an area of land in excess of 20 ha to grow crops. A "crop" is defined as cereal, coarse grains, oilseed, peanuts, lupins, dry field peas or dry field beans. This definition does not include crops fed to animals or grazed on by animals on the same property.

Cultivation 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*
- (e) the clearance of woody vegetation* and new tracking* in a Hill Country Erosion Management Area*.

Cumulative nitrogen leaching maximum means the total kilograms of nitrogen leached per hectare per year for the total area of a farm (including any land[^] not used for grazing) and is calculated using the values for each land use capability class* specified in Table 14.2.

Dairy farming means using any area of land[^] greater than 4 ha for the farming of dairy cattle for milk production. This includes land[^] used as a dairy cattle grazing runoff but excludes any dairy grazing arrangement. A dairy grazing arrangement is a third-party commercial arrangement between the owner of dairy cattle and another landowner for the purpose of temporary grazing.

Domestic food supply means crops grown for human consumption under the Commodity Levies (Vegetables and Fruit) Order 2007 (SR2007/161).

Intensive sheep and beef farming refers to properties greater than 4 ha engaged in the farming of sheep and cattle, where any of the land grazed is irrigated.

Land use capability class (LUC) means a classification of a parcel of land[^] in terms of five characteristics or attributes (rock, soil, slope*, erosion, vegetation). The land use capability class can be derived either from the New Zealand Land Resource Inventory (NZLRI) or by a suitably qualified person specifically assessing and mapping the land use capability classes for a particular parcel of land[^]. Where the LUC is assessed by a suitably qualified person, that person may use the more favourable classification of the land[^] available applying the 3rd or 2nd edition of the Land Use Capability Survey Handbook.

Nutrient management plan means a plan prepared annually in accordance with the Code of Practice for Nutrient Management (NZ Fertiliser Manufacturers' Research Association 2007) which records (including copies of the OVERSEER® input and output files used to prepare the plan) and takes into account all sources of nutrients for intensive farming and identifies all relevant nutrient management practices and mitigations, and which is prepared by a person who has both a Certificate of Completion in Sustainable Nutrient Management in New Zealand Agriculture and a Certificate of Completion in Advanced Sustainable Nutrient Management from Massey University.

Water Management Sub-zone or Sub-zone (WMSZ) means a Water Management Sub-zone as described in Schedules A or I.

Water Management Zone means a Water Management Zone as described in Schedule A or the Seawater Management Zone as described in Schedule I.

21. Words or expressions that are followed by the symbol ^ denote expressions defined by the RMA. Words or expressions that are followed by the symbol* denote terms defined by the One Plan.

1.7 Glossary of Abbreviations

22. The following abbreviations have the meanings given below, when used in this report:

BMP, BMPs	Best Management Practice or Best Management Practices
CNLM	Cumulative Nitrogen Leaching Maximum (as specified in Table 14.2)
GMP, GMPs	Good Management Practice or Good Management Practices
Horizons	Manawatū-Whanganui Regional Council (trading as 'Horizons Regional Council')
IFLU	Intensive Farming Land Use (and includes the farming types defined in One Plan Policy 14-5)
N	Nitrogen
NES-FM	Resource Management (National Environmental Standards for Freshwater) Regulations 2020
NPS-FM	National Policy Statement for Freshwater Management
One Plan	The Consolidated Regional Policy Statement, Regional Plan and Regional Coastal Plan for the Manawatū-Whanganui Regional Council
PC2	Proposed Plan Change 2 as publicly notified
RMA	The Resource Management Act 1991
RPS	Regional Policy Statement
WMSZ	Water Management Sub-Zone identified in the One Plan

2 Proposed Plan Change 2

2.1 Background – One Plan Approach to Managing Water Quality

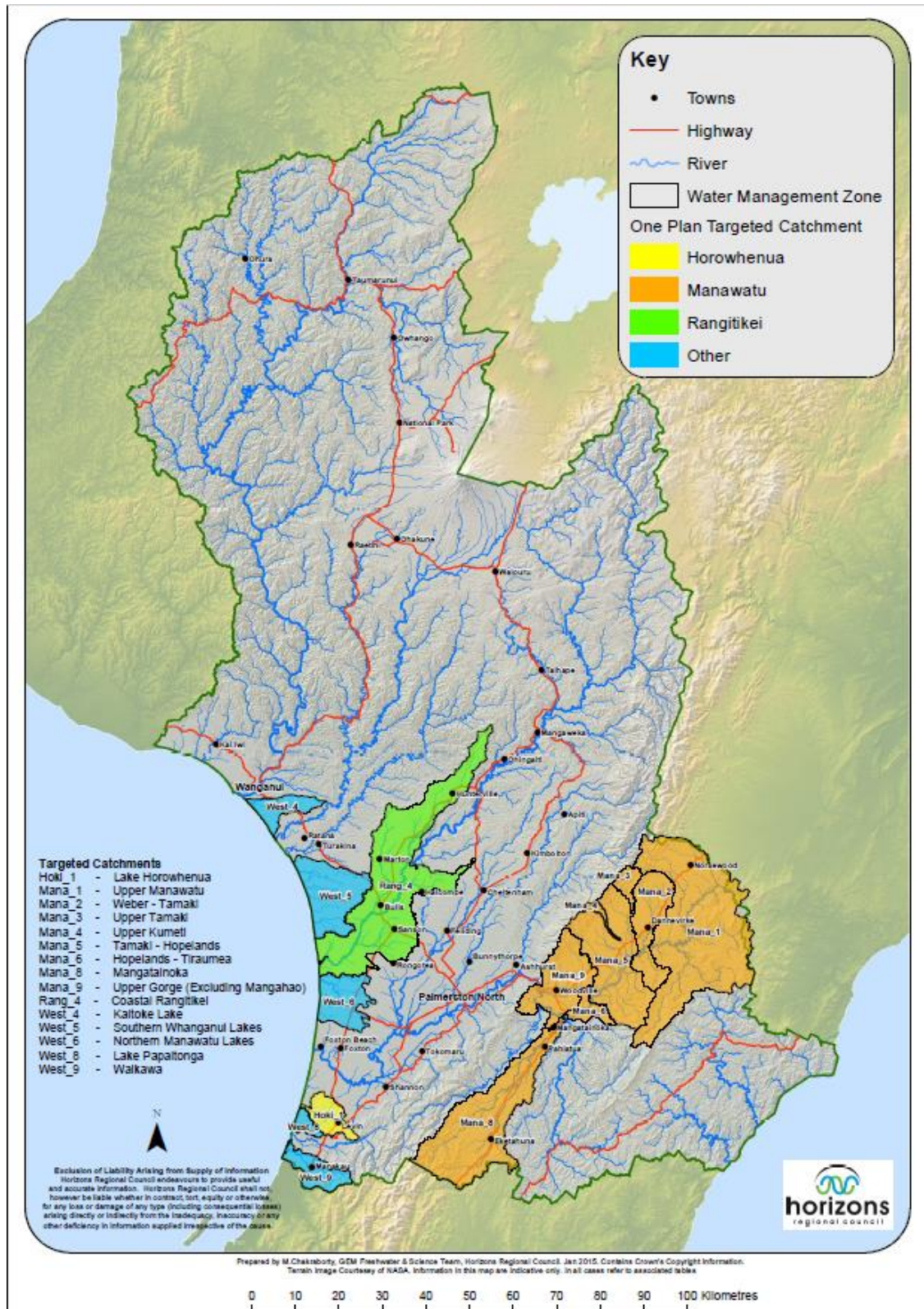
1. The One Plan is the consolidated Regional Policy Statement, Regional Plan, and Coastal Plan for the Region. The One Plan was notified in 2007 and became fully operative on 19 December 2014. It combined seven first generation regional plans into a single policy statement and regional plan for the Region. The One Plan sets out the strategic direction, and methods, for the regulatory management of, the use and development of natural and physical resources in the Region.
2. Chapter 5 of the One Plan is part of the Regional Policy Statement (“RPS”). Chapter 14 is part of the Regional Plan and addresses discharges to land and water.
3. Chapter 5 of the One Plan addresses water quality. Issue 5-1, within Chapter 5, identifies the decline in water quality in many rivers and lakes in the Region as one of the ‘big four’ issues of regional significance. Issue 5-1 attributes the decline in water quality, principally, to:
 - (a) nutrient enrichment caused by run-off and leaching from agricultural land, discharges of treated wastewater, and septic tanks;
 - (b) high turbidity and sediment loads caused by land erosion, river channel erosion, run-off from agricultural land and discharges of stormwater; and
 - (c) pathogens from agricultural run-off, urban run-off, discharges of sewage, direct stock access to water bodies and their beds and discharges of agricultural and industrial waste.
4. Responding to these issues, RPS Objective 5-2 for water quality is, broadly, that:
 - (a) surface water and groundwater quality is to be enhanced where it is degraded and;
 - (b) otherwise, water quality is to be maintained; and
 - (c) accelerated eutrophication and sedimentation of lakes is to be prevented or minimised.
5. The One Plan’s strategies, to achieve Objective 5-2, are set out in Policies 5-2 to 5-6. Policies 5-2 to 5-5 require that surface water quality is enhanced where the water quality targets specified in Schedule E are not met or maintained where targets are met. Policy 5-6 requires that groundwater quality be maintained or, where degraded, is enhanced.

6. I include, in **Attachment B1** to this report, extracts of the relevant One Plan RPS and regional plan objectives and policies.

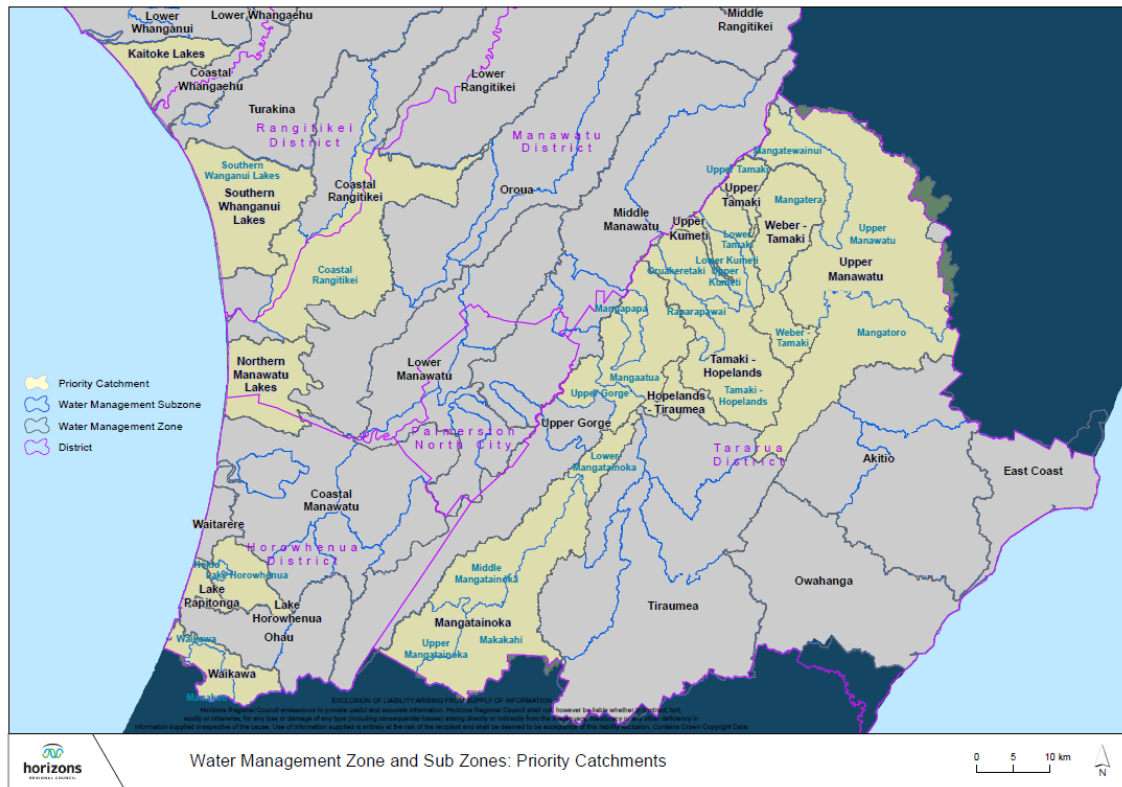
2.2 The One Plan Approach to Nutrient Management

7. RPS Policies 5-7 and 5-8 establish a framework for managing land use activities that have the potential to affect groundwater and surface water quality. Policy 5-7 identifies ‘targeted Water Management Sub-zones’ where land use activities are significant contributors to elevated contaminant levels in groundwater or surface water. These targeted water management sub-zones are also known as ‘priority catchments’ and are listed in Table 14.1 and shown on the following two maps. The first map shows the location of the targeted water management sub-zones (“**WMSZ**”) within the region.

Map One



Map 2



8. The second map is at closer scale and identifies the catchments and the names of the targeted water management sub-zones as they appear in Table 14.1:

Catchments	Targeted WMSZs:	
	Shown on Map as:	Also Referred to as:
Mangapapa	Mangapapa	Mana_9b
Waikawa	Waikawa Manakau	West_9a West_9b
Papaitonga	Lake Papaitonga	West_8
Mangatainoka	Upper Mangatainoka Middle Mangatainoka Lower Mangatainoka Makakahi	Mana_8a Mana_8b Mana_8c Mana_8_d
Coastal Lakes	Northern Manawatu Lakes Kaitoke Lakes Southern Wanganui Lakes	West_6 West_4 West_5
Coastal Rangitikei	Coastal Rangitikei	Rang_4
Lake Horowhenua	Lake Horowhenua Hokio	Hoki_1a Hoki_1b
Upper Manawatu above Hopelands	Upper Manawatu Mangatewainui Mangatoro Weber-Tamaki	Mana_1a Mana_1_b Mana_1_c Mana_2_a

Catchments	Targeted WMSZs:	
	Shown on Map as:	Also Referred to as:
	Mangatera Upper Tamaki Upper Kumeti Tamaki-Hopelands Lower Tamaki Lower Kumeti Oruakeretaki Raparapawai	Mana_2_b Mana_3 Mana_4 Mana_5a Mana_5b Mana_5_c Mana_5_d Mana_5_e
Manawatū above Gorge	Hopeland-Tiraumea Mana_6 Upper Gorge Mana_9a Mangaatua	Mana_6 Mana_9a Mana_9c

9. The list of priority catchments was one of the matters addressed during the One Plan appeals. The list included in the publicly notified One Plan was longer. Some WMSZ were deleted from the list and others were reinserted as a result of appeals.
10. RPS Policy 5-7 intends that IFLU activities will be actively managed, including through regulation. RPS Policy 5-8 details the scope and intended regulatory approach, addressing nutrients, faecal contamination (E. coli) and sediment. Nitrogen (“N”) is managed by setting nitrogen leaching maximum limits. These are the ‘cumulative nitrogen leaching maximums’ (“CNLMs”) in Table 14.2. The approach is a tiered response in that the regulation of nutrients is intended to contribute to achievement of water quality improvement, by reducing nutrient inputs, over time. Reversing water quality degradation and improvement in water quality are expected to be achieved, over time, as a result of the combination of all One Plan regulatory requirements and Horizons’ other non-regulatory methods. A journey in time, in a manner of speaking, towards supporting the values identified in Schedule B of the One Plan.
11. RPS Policy 5-8 sets out the regulatory intention for managing N, which distinguishes between the targeted water management sub-zones and the rest of the region:
 - (a) In the targeted WMSZ only, all *existing* intensive farming land use activities must meet the Table 14.2 CNLM; and
 - (b) Throughout the region (including in the targeted WMSZ), all *new* intensive farming land use activities must meet the Table 14.2 CNLM.
12. The terms ‘existing’ and ‘new’ IFLU activities are defined in Policy 14-5 (b). The definition is not completely straightforward. It requires reference to footnotes and a table elsewhere in Chapter 14. PC2 proposes some changes to attempt to clarify the meaning (although, for reasons I discuss later in this report, I consider further clarification would help). All existing IFLU activities in the targeted water management sub-zones need consent to continue operating (Policy 5-8(a)(ii) and Policy 14-5(d)).

13. Rule 14-1 provides a controlled activity pathway for existing IFLU activities that have estimated nitrogen leaching loss no greater than the Table 14.2 CNLMs. Rule 14-2 provides a restricted discretionary activity pathway for existing IFLUs that exceed the Table 14.2 CNLMs or which fail to comply with other Rule 14-1 standards. At the time the One Plan became operative, it was expected that compliance with the Table 14.2 CNLMs would be achievable on most farms using good management practices (“**GMP**”).
14. The One Plan represented a step change in the approach to environmental regulation for the Region, by regulating contaminants entering surface water and groundwater from point source discharges and from diffuse IFLU sources. The One Plan was also innovative, compared to other approaches at the time, in focusing on outputs from farm systems as opposed to inputs. The One Plan’s policy framework for managing diffuse nutrient leaching is based on the ‘natural capital’ approach, whereby N leaching loss limits are estimated for IFLU activities according to land use capability (“**LUC**”) classification and the productive potential of the land. I note that this approach is not universally accepted (as reflected in the submissions received on PC2). However, after debate on appeal, the Court endorsed the ‘natural capital’ approach adopted in the One Plan. Applying the ‘natural capital’ approach, the highest nitrogen losses occur from the most productive LUC classes (and these are the LUC classes typically farmed more intensively). PC2 does not change the fundamental approach of the One Plan.

2.3 Table 14.2 and the Rules

15. The Table 14.2 CNLMs are applicable to both existing and new IFLU activities in Rules 14-1 and 14-2 (for existing IFLU) and Rules 14-3 and 14-4 (for new IFLU):

Rule 14-1	Existing IFLU activities that meet the Table 14.2 CNLM limits (subject to conditions) Priority catchments only	Controlled Activity
Rule 14-2	Existing IFLU activities that exceed the Table 14.2 CNLM limits or fail to comply with conditions Priority catchments only	Restricted Discretionary Activity
Rule 14-3	New IFLU activities that meet the Table 14.2 CNLM limits (subject to conditions) Anywhere in the region	Controlled Activity
Rule 14-4	New IFLU activities that exceed the Table 14.2 limits or fail to comply with conditions Anywhere in the region	Restricted Discretionary Activity

16. The Table 14.2 CNLMs set cumulative N leaching limits over a stepped 20-year timeframe (with limits at ‘year 1’, ‘year 5’, ‘year 10’ and ‘year 20’). These dates

commence from the date of legal effect of the relevant rule. The date of legal effect is different as between dairying and other IFLU activities. It also differs between targeted WMSZ.

17. The Table 14.2 CNLMs target only N. The CNLMs in Table 14.2 express the cumulative N limit as kilograms-per-hectare-per-year ("**kg/ha/yr**"). IFLU activities qualify for consent under the rules only if they are accompanied by a 'nutrient management plan' ("**NMP**") which must demonstrate what the estimated N leaching loss from the land. Individual IFLU activities calculate their N leaching loss using a nutrient management modelling software package known as Overseer[®].¹ Overseer[®] models the impact of farm management on the flow of nutrients through a farm system and can estimate the amount of nitrogen that will leach from the root zone of the soil from a range of farming systems. Table 14.2 included CNLMs, based on the 2007 version of Overseer[®] (version 5.2.6), for a legume-based pastoral farming system in each of the eight listed LUC.
18. Overseer[®] is a predictive model. Adjustments to the variables in the Overseer[®] model can adjust the predicted nitrogen loss output, even where no change has actually occurred on the ground for the farm system. Overseer[®] has been upgraded several times since 2007. A 2014 upgrade made a significant change to Overseer[®], including changes to the default settings which meant that the estimated nitrogen losses from the root zone of a range of dairy farming and forestry systems increased by between 32.5% and 66%, even without any change in the farm system itself. This means that, applying more recent versions of Overseer[®], the N leaching loss for individual activities is estimated on a completely different basis from the 2007 version 5.2.6, with much higher estimated N leaching loss. As a result, very few existing IFLU activities are able to meet the Table 14.2 CNLM limits when calculating their N leaching loss using the current Overseer[®] version. This means that Table 14.2 CNLMs are no longer achievable on most farms using GMP. Horizons determined that the Table 14.2 CNLMs should be recalibrated to reflect the more recent Overseer[®] (which, at the time of preparing PC2, was version 6.2.3). While there have been further upgrades since then, none, according to Dr Hanly, have included a significant step change like the change in 2014.

2.4 Issues Arising from Implementation of the One Plan IFLU Provisions

19. Dr Peet's s 42A report discusses the 2017 Environment Court declaration proceedings (the "**Declaration Decision**") and the finding that there were inconsistencies in the way the One Plan provisions for IFLU activities were being implemented. Dr Peet also references the 2018 independent legal and planning audit of the One Plan policy framework² which confirmed that, while Rule 14-2 contemplates a consent pathway for existing IFLU activities that exceed the Table 14.2 CNLMs, the relevant One Plan policies are highly directive in requiring that the Table 14.2 limits must not be exceeded.

¹ And I note that the One Plan definition of 'nutrient management plan' refers to Overseer and assumes use only of Overseer for this purpose.

² Undertaken by Beca and Ellis Gould (20 November 2018).

20. The independent Beca/Ellis Gould advice states at 3.2 (c):

The rule framework of the Regional Plan (Rule 14-2) provides for such activities to be considered, by way of land use consent applications. However, the Regional Plan Policies 14-5 and 14-6 are very directive and essentially significantly limit the circumstances whereby consent can be granted where modelled nitrogen leaching limits are not able to be achieved. Those policies are essentially worded like performance standards to rules, and direct that, even in cases where consent is being sought to exceed nitrogen leaching maximums, that these maximums must be met.

21. The One Plan policies were developed long before the determination of cases such as *King Salmon*³ and *RJ Davidson*.⁴ Where planning documents have been prepared in accordance with Part 2 of the RMA and contain a coherent set of policies designed to achieve clear environmental outcomes, these cases confirmed that the proper approach is to 'implement' those policies, without reference to the overall judgement provided for by section 5 of the RMA. This approach, while appropriate, compounds the challenges with the One Plan framework and its application on a day to day basis.
22. I set out below the wording of RPS policies 5-8 and Regional Plan Policies 14-5 and 14-6, with a brief commentary on the directive nature of those policies:

Policy 5-8: Regulation of intensive farming <i>land</i>^A use activities affecting groundwater and surface <i>water</i>^A quality	
(a) Nutrients	
i. Nitrogen leaching maximums must be established in the regional plan which:	<i>These are the CNLMs in Table 14.2</i>
(A) take into account all the non-point sources of nitrogen in the catchment	
(B) will achieve the strategies for surface <i>water</i> ^A quality set out in Policies 5-2, 5-3, 5-4 and 5-5, and the strategy for groundwater quality in Policy 5-6	<i>'will achieve' suggests that changes in farming practice by IFLU activities will, alone, achieve the water quality strategies – this is not the case and was not the intention</i>
(C) recognise the productive capability of <i>land</i> ^A in the <i>Water Management Sub-zone</i> *	
(D) are achievable on most farms using good management practices	
(E) provide for appropriate timeframes for achievement where large changes to management practices or high levels of investment are required to achieve the nitrogen leaching maximums.	
ii. Existing intensive farming <i>land</i> ^A use activities must be regulated in targeted Water Management Sub-	<i>Policy 5-8 (a) (ii) is highly directive: existing IFLU</i>

³ *Environmental Defence Society Incorporated v the New Zealand King Salmon Company Limited* [2014] NZSC 38.

⁴ *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316.

zones* to achieve the nitrogen leaching maximums specified in (i).	activities must achieve the CNLMs in Table 14.2 (no exceptions are contemplated)
Policy 14-5: Management of intensive farming land[^] uses In order to give effect to Policy 5-7 and Policy 5-8, intensive farming land[^] use activities affecting groundwater and surface water[^] quality must be managed in the following manner: ... (d) Existing intensive farming land[^] uses regulated in accordance with (b)(i) must be managed to ensure that the leaching of nitrogen from those land[^] uses does not exceed the <i>cumulative nitrogen leaching maximum*</i> values for each year contained in Table 14.2, unless the circumstances in Policy 14-6 apply.	Policy 14-5 (d) is highly directive: the only exceptions provided for are those in 14-6 (b) (i)
Policy 14-6: Resource consent decision-making for intensive farming land[^] uses When making decisions on resource consent[^] applications, and setting consent conditions[^], for intensive farming land[^] uses the Regional Council must: (a) Ensure the nitrogen leaching from the land is managed in accordance with Policy 14-5. (b) An exception may be made to (a) for existing intensive farming land[^] uses in the following circumstances: (i) where the existing intensive farming land[^] use occurs on land that has 50% or higher of LUC Classes IV to VIII and has an average annual rainfall of 1500 mm or greater; or (ii) where the existing intensive farming land[^] use cannot meet year 1 <i>cumulative nitrogen leaching maximums*</i> in year 1, they shall be managed through conditions on their resource consent to ensure year 1 <i>cumulative nitrogen leaching maximums*</i> are met within 4 years.	Applies to existing IFLU only These are highly confined circumstances (Associate Prof. Horne describes them as nearly impossible) Year-1 (as defined in Table 14.2) has now passed. This exception is no longer available.

23. Although there are existing IFLU activities which have obtained consent to continue operating, many have not. The Council estimates that there are approximately 235 existing IFLU activities operating without the necessary consents in the targeted water management sub-zones (combined figures). These are summarised in the following table:

Estimated Numbers of Existing IFLU Activities Operating Without Consent:	
Type of IFLU Activity:	Estimated Numbers:
Dairy	167
Commercial Vegetable Growing	48
Cropping	15
Irrigated Sheep and Beef	5
Total	235

24. I note that the estimate of 167 is the agreed estimate used by the Water Quality experts at conferencing⁵ and reflects the inputs to the N load modelling undertaken by Land, Water, People. I note that this estimate differs from the estimate provided in the Section 32 Evaluation Report for PC2 (2019) (the “**Section 32 Report**”).⁶ The Section 32 Report assumed a total of 118 unconsented dairy farms, but omits the West Coast, Ohau and Lake Horowhenua catchments, which accounts for the reporting difference.
25. No applications for existing IFLU activities that exceed the Table 14.2 limits have been received or processed since 2017. The combined difficulty of complying with Table 14.2 using the current version of Overseer® and the absence of a viable consent pathway for exceedances of Table 14.2 has stalled Horizons’ regulation of these existing IFLU activities. This is delaying achievement of the intended N leaching reductions anticipated when the One Plan was proposed. According to Horizons, it is also causing stress and uncertainty for farmers, growers, tangata whenua and the wider community.
26. I understand that Horizons has continued to receive applications, and grant consents for, controlled activities for existing IFLU activities that meet the Table 14.2 limits.
27. In 2018 Horizons commissioned a report on the effectiveness and efficiency of the One Plan’s IFLU provisions under section 35 of the RMA. This report⁷ confirmed that there were constraints within the One Plan policy and rule framework that were preventing achievement of the One Plan objectives and policies for management of IFLU activities.
28. In light of the above-described issues, Horizons resolved in 2018 that a plan change was necessary to enable the remaining unconsented IFLU activities to be regulated.

2.5 Problem Statement

29. Section 4 of the s 32 report describes the ‘problem’ that PC2 is endeavouring to resolve. The primary issue is described (page 19 of the s 32 report) as the One Plan policies for managing existing IFLU activities not working in the manner intended at the time the One Plan was made operative. It is stated there that *‘the One Plan intended for most farms using good management practice to be able to meet Table 14.2 and be considered as controlled activities’*. The reality is that the combined impact of the Overseer® upgrades and the directive One Plan policies means very few existing IFLU activities can achieve consent, either as controlled activities (meeting the Table 14.2 limits) or as restricted discretionary activities (exceeding the Table 14.2 limits).

⁵ Answer to Question 4 (page 8 of the 28 July 2020 Joint Witness Statement of Water Quality experts).

⁶ See page 22.

⁷ *Manawatu-Wanganui Regional Council One Plan section 35 report: intensive farming* (July 2018).

30. The Section 32 Report describes the economic effects of this stalled regulatory framework (in sections 4.5 and 4.6) and concludes (in section 4.8) that the operative IFLU provisions are no longer fit for purpose.

2.6 PC2 Purpose

31. The purpose of PC2 stated in the s 32 report⁸ is:

To improve the workability of the provisions for intensive farming land use by updating the nitrogen leaching maximums and providing a viable consenting pathway for activities that do not comply with them, in order to enable a return to effective regulation of existing intensive farming land uses through the One Plan as soon as practicable.

32. PC2 seeks to address the identified difficulties by:

- (a) Recalibrating the CNLMs in Table 14.2, to reflect improvements in the nutrient modelling software tool Overseer[®] (and the recalibration is based on version 6.2.3); and
- (b) Reinforcing ‘good management practices’ as part of IFLU activities; and
- (c) Providing a workable consent pathway for existing IFLU activities that cannot achieve the Table 14.2 CNLMs limits.

33. The s 32 report notes (page 9) that timeliness is an overarching driver for PC2 because:

- (a) It is important that any changes are made as soon as reasonably practicable, so that existing IFLU activities can be granted consent (or declined consent) to resolve the current uncertainty and the social and economic impacts of that uncertainty;
- (b) The changes in farming practice necessary to obtain resource consent and/or comply with consent conditions will drive water quality improvement in the targeted water management sub-zones; and
- (c) There are practical and fairness issues associated with enforcing the operative provisions when there is no means to comply with Table 14.2 and no viable consent pathway to exceed it. Horizons cannot allow the current stalled regulatory framework to continue, with the effect that unconsented IFLU are not regulated.

⁸ Horizons Regional Council, *Section 32 Evaluation of Proposed Plan Change 2*, (July 2019), p 30.

2.7 Changes Proposed by PC2

34. The publicly notified text of PC2 is contained in **Attachment B2** to this report. PC2 makes no change to any One Plan objective. The changes proposed are to RPS Policy 5-8, regional plan Policies 14-3 14-5 and 14-6, Methods 5-12 and 5-13, Table 14.2 and Rules 14-1 and 14-2. A new Rule 14-2A is inserted to provide a new discretionary activity default for existing IFLU activities that do not meet the specified N leaching limits. A definition of 'good management practices' is inserted and the definition of 'nutrient management plan' is amended.
35. In summary, the proposed changes address the issues I earlier highlighted in the policy framework in the following way:

Policy 5-8: Regulation of intensive farming *land*^A use activities affecting groundwater and surface *water*^A quality

(a) Nutrients

- i. Nitrogen leaching maximums must be established in the regional plan which:
 - (F) take into account all the non-point sources of nitrogen in the catchment
 - (G) will achieve the strategies for surface *water*^A quality set out in Policies 5-2, 5-3, 5-4 and 5-5, and the strategy for groundwater quality in Policy 5-6
 - (H) recognise the productive capability of *land*^A in the *Water Management Sub-zone*^{*}
 - (I) are achievable on most farms using good management practices
 - (J) provide for appropriate timeframes for achievement where large changes to management practices or high levels of investment are required to achieve the nitrogen leaching maximums.
- ii. Existing intensive farming *land*^A use activities must be regulated in targeted *Water Management Sub-zones*^{*} to achieve the nitrogen leaching maximums specified in (i).

These are the CNLMs in Table 14.2
PC2 recalibrates the CNLMs so they are relevant for current Overseer®

'will achieve' suggests that changes in farming practice by IFLU activities will, alone, achieve the water quality strategies – this is not the case and was not the intention
PC2 deletes 'will achieve'

Policy 5-8 (a) (ii) is highly directive: existing IFLU activities must achieve the CNLMs in Table 14.2 (no exceptions are contemplated)
PC2 provides for 2 exceptions in Policy 14-5 (d) and Policy 14-6 (d): (1) where GMPs are adopted and (2) for transition to non-IFLU activities

Policy 14-5: Management of intensive farming *land*^A uses

In order to give effect to Policy 5-7 and Policy 5-8, intensive farming *land*^A use activities affecting groundwater and surface *water*^A quality must be managed in the following manner:

- ...
- (d) Existing intensive farming *land*^A uses regulated in accordance with (b)(i) must be managed to ensure that the leaching of nitrogen from those *land*^A uses does not exceed the *cumulative nitrogen leaching maximum*^{*} values for each year contained in Table 14.2, unless the circumstances in Policy 14-6 apply.

Policy 14-5 (d) is highly directive: the only exceptions provided for are those in 14-6 (b) (i)
The unachievable exceptions are deleted and replaced by the 2 exceptions detailed in Policy 14-6 (d)

Policy 14-6: Resource consent decision-making for intensive farming land[^] uses

When making decisions on *resource consent*[^] applications, and setting consent *conditions*[^], for intensive farming land[^] uses the Regional Council must:

- (c) Ensure the nitrogen leaching from the land is managed in accordance with Policy 14-5.
- (d) An exception may be made to (a) for existing intensive farming land[^] uses in the following circumstances:
 - (iii) where the existing intensive farming land[^] use occurs on land that has 50% or higher of LUC Classes IV to VIII and has an average annual rainfall of 1500 mm or greater; or
 - (iv) where the existing intensive farming land[^] use cannot meet year 1 *cumulative nitrogen leaching maximums** in year 1, they shall be managed through conditions on their resource consent to ensure year 1 *cumulative nitrogen leaching maximums** are met within 4 years.

Applies to existing IFLU only

PC2 also only applies to existing IFLU

These are highly confined circumstances (David Horne describes them as nearly impossible)

PC2 deletes this exception

Year-1 (as defined in Table 14.2) has now passed. This exception is no longer available.

PC2 deletes this clause

PC2 replaces the unachievable exceptions with 2 new exceptions: (d)(i) where GMP is implemented and (d)(ii) for transition to non-IFLU activities

PC2 also inserts matters to be considered in determining whether to grant the (d)(i) and (d)(ii) exceptions

36. In the rules, PC2 makes the following structural changes:

Rule 14-1	Existing IFLU activities that meet the Table 14.2 CNLM limits (subject to conditions) Priority catchments only	Controlled Activity <i>Rule 14-1 is retained and GMP is added to the reserved matters, along with consideration of other contaminants</i>
Rule 14-2	Existing IFLU activities that exceed the Table 14.2 CNLM limits or fail to comply with conditions Priority catchments only	Restricted Discretionary Activity <i>This is now available only for existing IFLU activities that fail to comply with standards other than the CNLM limits; GMP is added along with consideration of other contaminants</i>
Rule 14-2A	<i>Existing IFLU activities that fail to comply with the Table 14.2 CNLMs</i>	Discretionary Activity
Rule 14-3	New IFLU activities that meet Table 14.2 CNLM limits	Controlled Activity <i>No change</i>
Rule 14-4	New IFLU activities that exceed Table 14.2	Restricted Discretionary Activity <i>No change</i>

3 Procedural Details

3.1 Timeline: Pre-Notification Process and Consultation

1. Following the Environment Court's declaration decision (March 2017), Horizons undertook evaluations and sought independent planning and legal advice on the issues that had been identified (described above) and how to address the issues. The following table summarises the steps that followed.

2017 - June 2018	Horizons undertook evaluation of IFLU provisions, including engagement with iwi, industry, territorial authorities and stakeholders focusing on the experience of implementation of nutrient management provisions and economic impact assessments.
July 2018	Independent s 35 report ⁹ was finalised (it identified constraints in the One Plan that are preventing the intensive farming land use activity provisions from achieving the water quality objectives of the RPS).
August 2018	Horizons resolved ¹⁰ to proceed towards notification of plan change to update Table 14.2, and prepare a plan change to provide a realistic consenting pathway for intensive farming land use activities aligned to the Regional Policy Statement. Pre-notification consultation commenced (in accordance with clause 3 Schedule 1 RMA).
September 2018	Horizons resolved ¹¹ to pursue a streamlined planning process and prepare an application to the Minister for the Environment (the Minister).
September – December 2018	Work progressed on preparation of a draft application to the Minister for streamlined planning process to update Table 14.2. Engagement with iwi authorities, stakeholders and community progressed. Social impact assessment and technical reports were commissioned.
December 2018	Horizons received the independent Beca/Ellis Gould planning and legal advice ¹² provided to the Minister.
February 2019	Horizons resolved ¹³ to move towards notification of a plan change including both an update to Table 14.2 and changes to the policy and regulatory framework for nutrient management to provide a realistic consenting pathway. There was no apparent appetite by MfE for the streamlined planning process and work on this initiative was halted.
February – April 2019	Pre-notification consultation on the revised PC2 approach continued (in accordance with clause 3 Schedule 1 of the RMA: with the Minister, iwi authorities, local authorities and key stakeholders. Consultation commenced earlier in December 2018 onwards, with some iwi.
May – June 2019	Ongoing consultation, and wider community and stakeholder engagement. A stakeholder workshop was held to 'road test' draft plan change provisions. This involved two teams with

⁹ Hill Young Cooper. *Manawatū-Whanganui Regional Council One Plan Section 35 Report: Intensive Farming*. (July 2018).

¹⁰ Horizons Regional Council Resolution SP18-96 (28 August 2018).

¹¹ Horizons Regional Council Resolution SP18-105 (25 September 2018).

¹² *Independent Planning and Legal Advice on the Manawatū-Whanganui Regional Council One Plan – Consenting Pathways for Dairy and Horticulture Activities* (Beca/ Ellis Gould - November 2018).

¹³ Horizons Regional Council Resolution 19-418 (26 February 2019).

	resource management consenting, water quality science and agronomic expertise preparing and evaluating a mock IFLU discretionary activity application. Thirty-two observers attended the workshop representing eight of the 24 iwi, local authorities, government ministries, stakeholders, industry, environmental and community groups invited. Feedback was received from four participants. Consultation with iwi authorities continued, including circulation of a draft set of PC2 provisions (in accordance with clause 4A Schedule 1 and section 34A (1A) RMA).
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2. At the outset, and prior to December 2018, PC2 was focused solely on recalibrating the Table 14.2 CNLMs. PC2 was prioritised ahead of wider and more substantive changes because it was seen as being an urgent, and essentially administrative, update to the One Plan. At the time PC2 was viewed as the most practicable pathway to enable the continued implementation of the controlled activity rules (14-1 and 14-3) for existing and new IFLU activities in the short to medium term. A streamlined process was considered to be proportionate to the scale and complexity of the proposal. Its purpose – correcting an unintended consequence – appeared to Council officers to meet the criteria set out in section 80C(2)(d) of the RMA. However, engagement with MfE officials indicated that the application would not be successful and the initiative was abandoned.
3. Appendices C and D of the Section 32 Report set out the key steps in Horizons' consultation with iwi authorities and with stakeholders during the development and drafting of PC2. Dr Peet discusses some aspects of that in more detail. The chronologies included in Appendices C and D record that Horizons engaged with iwi, local authorities in the Region, farming sector groups, environmental and community advocacy organisations, rural land owners as well as the Minister and his officials.
4. In accordance with the requirements of clause 3A of Schedule 1 of the RMA, a letter was sent to all local authorities on 28 September 2018, signalling the intention to advance PC2 (at that time involving only a recalibration of the Table 14.2 limits). I am advised that a meeting was also held with Horowhenua District Council representatives on 25 September 2018. Once Horizons realised that it needed to do address the policy framework as well as the Table 14.2 recalibration, a letter was sent on 9 April 2019 attaching a summary of the intended scope of the PC2 policy changes. I understand that this fulfilled the requirements of the Triennial Agreement that was in place following the 2019 local authority elections (which came into effect in March 2020).
5. The record of consultation demonstrates that, in addition to formal consultation correspondence:
 - Officers sent follow-up emails to iwi, particularly focusing on those whose rohe includes the One Plan target catchments who are likely most affected by PC2;
 - Officers met with those iwi who requested meetings;

- Officers attended meetings (including making presentations on PC2) with industry bodies, and farmers in Tararua and Rangitikei target catchments;
- Horizons also made information about PC2 available to the wider community via mainstream and social media, and Horizons website.

3.2 PC2 Notification, Submissions and Further Submissions

6. Horizons Council considered the s 32 report at a meeting held on 25 June 2019 and resolved¹⁴ at that meeting to publicly notify PC2, to provide a submission period of 60 working days and to appoint a ‘friend of the submitter’. PC2 was publicly notified on 22 July 2019 by notice in newspapers circulating in the Region.¹⁵ Notice of PC2 was served on all territorial local authorities within the Region and on all adjoining district and regional councils. Notice was also served on iwi authorities, the Minister and on dairy farmers and CVG growers who were understood at that time to be operating IFLU activities without consent.
7. PC2 and all relevant supporting technical reports were uploaded to Horizons’ website, together with an electronic submission form. Copies of PC2 were also made available at Horizons’ main office in Palmerston North and at its Woodville, Marton and Whanganui offices. The ‘friend of the submitter’ (Leigh Old) was available between then and the closing date for submissions (21 October 2019).
8. Eighty-five submissions were received by the closing date for submissions. One submission (S64) was subsequently withdrawn. Submission S77 was found to be a duplicate S86. Three submissions were received after the closing date. Horizons’ Manager Strategy and Regulation granted an extension of time,¹⁶ pursuant to s 37 of the RMA under delegated authority, to allow these submissions to be considered (and they are included in the set of publicly available submissions on PC2). The net result is 84 submissions from the submitters listed in **Attachment C1** to this report and summarised in the table below:

¹⁴ Horizons Regional Council 19-466 (25 June 2019).

¹⁵ Manawatu Standard, Wanganui Chronicle, Bush Telegraph, Ruapehu Bulletin, Horowhenua Chronicle, Feilding Rangitikei Herald.

¹⁶ On 7 November 2019.

Table - Submissions on Proposed Plan Change 2

Group	Submitters	Number of submissions received
Government	Director General for Conservation	1
Iwi authorities, iwi and hapū	Kahungunu ki Tāmiki nui-a-Rua Trust, Muaūpoko Tribal Authority Inc., Ngā Waihua o Paerangi Trust, Ngāti Turanga, Te Roopu Taiao o Ngāti Whakatere Trust, Te Runanga o Raukawa, Rangitāne o Tamaki Nui a Rua, Hōkio A Maori Land Trust, Ngā Tangata Tiaki, Tamarangi Hapū, Te Mauri o Rangitāne o Manawatū/ Tanenuiarangi Manawatū Incorporated	11
Territorial authorities	Ruapehu District Council, Tararua DC, Horowhenua DC, The Combined Councils, Palmerston North CC, Manawatū DC	6
NGOs and Environmental Groups	Environmental Defence Society, Fish & Game, Forest & Bird, Water Protection Society, Arawhata Wetland Alliance Group	5
Primary Production Sector Groups	DairyNZ, Federated Farmers of New Zealand Inc., HortNZ, Beef + Lamb, Griffins Foods Ltd, Ravensdown Limited, Balance Agri-nutrients Limited, BakerAg, Potatoes NZ	9
Local Grower Associations	Ohakune Growers Association, Tararua Growers Association	2
Individual farmers	Lisa & Paul Charmley, Sarah von Dazelden, Ian & Shirley Cumming, Geoff and Cynthia Kane, John Lamason, Andrew Day, BEL Group, Neil Filer, Vincent J Payne, Carla Marsden, Mark Woodruffe, Russell & Karen Phillips	12
Individual growers	Mike Moleta (Freshpik Farms Ltd), Ian Corbetts, Woodhaven Gardens Ltd, Parlato Farming Ltd and 34 pro forma grower submissions	38

9. Horizons prepared and publicly notified a summary of submissions (on 18 November 2019) as required by clause 7 of Schedule 1 of the RMA. The closing date for receipt of further submissions was 3 December 2019. Thirty-three further submissions were received from 16 further submitters. One further submission (FS23) was duplicated in error. One further submitter (Horowhenua District Council) submitted 18 individual further submissions.
10. Three submissions were lodged after the close of the further submissions period – the Group Manager Strategy and Regulation, under delegated authority, waived the time limits for all three of the late submissions. The net result is the 16 further submissions summarised in the table below.

Table - Further Submissions on Proposed Plan Change 2

Group	Further submitters	Number of further submissions
Territorial authorities	Manawatū District Council, Horowhenua District Council	19
Ministers	Director General of Conservation, MidCentral District Health Board	2
NGOs	Forest & Bird New Zealand, Environmental Defence Society	2
Local interest groups	Water Protection Society	1
Industry	HortNZ, DNZ, Potatoes NZ, Beef + Lamb, Fonterra	5
Individual growers	Chris Pescini, Woodhaven Gardens	2
Individuals	Teresa Marie Schultz	1

11. The summary of submissions and all submissions and further submissions are available on Horizons' website and have been supplied to the Hearing Panel. I include, in **Attachment E1** to this report, a table that lists all of the submission points (as publicly notified) and further submission points on PC2. I provide a summary of the issues raised in submissions in Chapter 5 of this report.

3.3 Relevant Supporting and Technical Information

12. PC2 is supported by a large body of evaluation reports and technical reports. The joint witness statement of the RMA Planners (29 July 2020 session) lists the primary data that is relevant to PC2. To the best of my knowledge, the listed material is available on Horizons' website. I refer to some of the listed material, where relevant, in this report.

3.4 Pre-Hearing Meetings and Expert Conferencing

13. In accordance with the Hearing Panel's directions, Horizons held pre-hearing meetings with submitters and their experts, commencing in March 2020. The programme of pre-hearing meetings was interrupted by the COVID-19 pandemic lockdown in New Zealand but recommenced in June 2020. Six pre-hearing meetings were held. The following table records the topics, the meeting dates and the broad scope of matters discussed. All meetings were held on a 'without prejudice' basis, with two exceptions:

- (a) Pre-hearing meeting no. 3: at the conclusion of the meeting, the participants agreed to release a brief agreed statement which is recorded in the following table; and

- (b) Pre-hearing meeting no. 4: at the conclusion of the meeting, the participants agreed to uplift the 'without prejudice' constraint and the record of that meeting is included in **Attachment C2**.

	Pre-Hearing Meeting Topic:	Held:	Purpose and Scope of Matters Discussed:
1	Implications for Wastewater Treatment Plant Wastewater Discharge to Land	13 March 2020	Discussion with representatives of the Region's territorial authorities about their concerns around the lack of provision in PC2 for IFLU activities associated with the land irrigation of treated municipal wastewater (and industrial wastewater) to land.
2	Alternative Approaches to Agriculture	17 March 2020	Discussion with representatives of Dairy NZ and Federated Farmers NZ about the alternative policy and rule framework requested in their submissions
3	Alternative Approaches to Horticulture		Discussion with commercial vegetable growers, grower representatives and advisers and other submitters about the implications of PC2 for CVG. Although the meeting was largely held 'without prejudice', the meeting participants agreed to release the following statement: <i>The participants expressed support for a process that would comprehensively review the provisions for intensive farming land use activities in the Lake Horowhenua catchment, involving growers, iwi and the community.</i>
4	Good Management Practice	18 June 2020 and 26 June 2020	Discussion with farmer submitters, farmer and grower sector representatives, iwi representatives and other submitters about what constitutes 'GMP' and the scope of N leaching reduction achievable from implementation of GMP and BMP
5	Consent Cost and Uncertainty	18 June 2020	Discussion of the likely cost of consent for alternative consent pathways, compliance requirements, information requirements for applications and enforcement issues
6	Water Quality	25 June 2020	Discussion with submitters about the state of water quality in the Region and the water quality implications of PC2

14. I include in **Attachment C3** to this report a list of attendees at each pre-hearing meeting.
15. At pre-hearing meeting No. 3 (alternative approaches for horticulture), participants requested that Horizons give consideration to amending PC2 in some way to accommodate CVG in a specific manner for the reasons discussed in their submissions and at the pre-hearing meeting. I agreed to communicate their request to Horizons. Dr Peet responded within the agreed timeframe; by email dated 10 July 2020:

Horizons has considered the request made at the 17 June 2020 pre-hearing conference to consider a variation to Plan Change 2 (PC2) to accommodate a separate, tailored, approach to commercial vegetable growing in the region. I understand that this request arose in the context of discussions around whether alternative approaches proposed by Horticulture NZ, Potatoes NZ, Woodhaven Gardens (supported by other submitters) are in scope ('on' the plan change). In response to the concerns raised at the pre-hearing meeting, Council officers have further work underway, looking at how those concerns could be addressed within the PC2 process.

At this stage Horizons preference is to work with the submitters and further submitters to explore amendments to PC2 that may address the concerns raised without the need to promulgate a variation. The section 42A writers are therefore again reviewing the relief sought in submissions with a view to circulating to the parties some options that may resolve the concerns. Their intention is to circulate their suggestions at least a week before the RMA Planning expert conference, with an indication of areas they can and cannot support within the relief sought. Horizons' view is that it would be more efficient/productive to let this work continue before any exchange of legal opinions on scope or further discussion of the merits of a variation.

Following expert conferencing, the parties will be able to consider whether their concerns have been addressed sufficiently, any matters that may arise relating to scope, and whether further options still need to be pursued. It is envisaged that discussions will continue between the parties in the lead up to the filing of the s42A reports. If there remains no agreement about how the concerns raised might be addressed within PC2, the issues will be reported to the Hearing Panel in the s. 42A report. As requested by the Panel, that report will highlight the requested relief that is considered to be within scope and beyond the scope of PC2. The report will also present any amendments to PC2 provisions that the reporting planner recommends as a result of discussion at expert conferencing/discussions. Before any decisions over next steps or proposed alternative pathways can be made (including any suggested variation), Council officers consider the expert conferencing should be concluded, and the parties fully informed as to their respective positions.

There will be an opportunity, following expert conferencing (early August), for Horizons and the parties to consider the outcome of expert conferencing and take advice before coming together again to discuss a way forward. We welcome the opportunity to continue discussions with you and your representatives at that time.

16. I drafted some suggested amendments to the PC2 provisions to address the issues that had been raised for CVG and agriculture and Dr Peet circulated these to the pre-hearing meeting participants. I received feedback from one person (Gerard Willis, Planning Consultant advising Dairy NZ and Federated Farmers NZ). Since then, I have developed those suggested amendments further, as discussed in Chapter 12 of this report.

17. Separate pre-hearing meetings were also held with iwi submitters. Invitations were extended to all iwi submitters and the following hui (or zoom hui) were held with:

Ngāti Tamarangi	(3 March 2020)
Jill Sheehy	(18 March 2020)
Ngāti Kahungunu ki Tāmaki-nui-a-Rua	(19 March 2020)
Rangitāne o Tamaki nui a Rua	(19 March 2020)
Rangitāne o Manawatū	(30 April 2020)
Muaūpoko Tribal Authority	(15 May 2020)
Rangitāne o Manawatū	(6 August 2020)
Ngā Waihua o Paerangi /	
Ngāti Rangi	(12 August 2020)
A Pan-Iwi Pre-Hearing meeting	(25 June 2020)
A second Pan-Iwi Pre-Hearing Meeting	(24 July 2020)

18. As with the other pre-hearing meetings, the iwi meetings were held on a 'without-prejudice' basis.

19. I attended all of pre-hearing meetings 1 to 6 and some of the iwi pre-hearing meetings (by zoom or in person). What I can say about the pre-hearing meetings is that they were useful in sharing submitters' differing views of the merits and potential effects of PC2. Some broad conceptual agreements were reached about GMP and BMP, consent implications, farm system modelling and about water quality state and trends. However, no specific agreements were reached about the changes proposed by PC2 or requested by submitters and parties reserved their positions for the Hearing Panel.

20. One agreed outcome of the final iwi submitter pre-hearing meeting was an agreement that Horizons would host and provide administrative support for an iwi expert conferencing session. It was agreed at that meeting that the purpose of the expert conferencing session would be to focus on the cultural values relevant to PC2. It was also agreed that the invitation for experts to participate in this conferencing session

would be extended to all iwi and hapū who had lodged submissions on PC2. I understand that expert conferencing session occurred on Friday 28 August 2020. At the time of writing the Section 42A Report, I had not yet received the joint witness statement resulting from that session.

21. Expert conferencing sessions were held on the topics of:
 - (a) Farming and growing management practices and farm systems modelling (three sessions: 21 July 2020, 22 July 2020 and 12 August 2020);
 - (b) Farm-scale economics (27 July 2020);
 - (c) Water quality (two sessions: 28 July 2020 and 13 August 2020);
 - (d) RMA planning (two sessions: 29 July 2020 and 20 August 2020);
 - (e) Regional scale macroeconomics (19 August 2020); and
 - (f) Iwi experts (28 August 2020).
22. Horizons' experts circulated draft questions for each conferencing session prior to the sessions, to enable experts to prepare. Horizons' experts also pre-circulated to their peer experts the preliminary results of additional work that was being undertaken in response to submissions, and in preparation for the hearing (including supplementary N load modelling and farm-scale economic modelling).
23. The joint witness statements from the expert conferencing sessions are available on Horizons' website and have been supplied to the Panel.

4 Statutory Framework

4.1 RMA Requirements

1. PC2 proposes amendments to both the RPS and the Regional Plan parts of the One Plan.
2. The RPS should be designed to achieve the purpose of the Act as set out in section 59 of the RMA, while the Regional Plan should be designed to accord with and to assist Horizons carry out its functions to achieve the purpose of the RMA. Regional plans must state the objectives for the region, the policies to implement the objectives and the rules (if any) to implement the policies. The RPS must be in accordance with, and the Regional Plan must give effect to, any national policy statement, the New Zealand Coastal Policy Statement (“NZCPS”), and any national planning standard. The Regional Plan must also give effect to the RPS.
3. The RMA framework that is relevant for each is set out below:

Requirements for Regional Policy Statement	Requirements for Regional Plan
s. 59: the purpose is to achieve the purpose of the RMA by providing an overview of issues and policies and methods to achieve integrated management of natural and physical resources.	s. 63: the purpose is to assist a regional council to carry out any of its functions in order to achieve the purpose of the RMA.
s. 61(1): must be in accordance with: • s. 30 functions; • Part 2; • obligation to prepare s. 32 evaluation; • obligation to have regard to s. 32 evaluation report; • all national policy statements; • NZCPS; • Regulations.	s. 66(1): must be in accordance with: • s. 30 functions; • Part 2; • obligation to prepare s. 32 evaluation; • obligation to have particular regard to s. 32 evaluation; • all national policy statements, the NZCPS, and standards; • Regulations.
s. 61 (2): shall have regard to: • management plans and strategies prepared under other Acts.	s. 66 (2): shall have regard to: • the RPS and plans, and any proposed RPS and plans; • management plans and strategies prepared under other Acts...”to the extent that their content has a bearing

s. 61 (2A): must take into account any relevant planning document recognised by an iwi authority	on resource management issues of the region”.¹⁷ s. 66 (2A): must take into account any relevant planning document recognised by an iwi authority, if it is lodged with the council, to the extent that its contents have bearing on the resource management issues of the region. s. 66 (3): must not have regard to trade competition. s. 67 (3): must give effect to: • any national policy statement; • NZCPS; • RPS. s. 67 (4): must not be inconsistent with: • a water conservation order; • any other regional plan for the region.
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4. PC2 must be prepared in accordance with the following: Horizons’ functions under section 30 of the RMA, Part 2 of the RMA (as relevant), its obligation to prepare an evaluation report under section 32 of the RMA, and any further revaluation required by section 32AA of the RMA, and the requirement to have particular regard to the evaluation reports and any regulations.

5. I consider these sections below.

4.2 Regional Council Functions (s 30)

6. The subject-matter of PC2 (the management of diffuse nutrient leaching from land use activities) falls squarely within the scope of Horizons functions and, in particular, the functions of:
- (a) Section 30(1)(a) – establishing, implementing and reviewing objectives, policies and methods to achieve integrated management of natural and physical resources;
 - (b) Section 30(1)(b) – preparing objectives and policies in relation to actual or potential effects of the use and development of land which are of regional significance;¹⁸

¹⁷ RMA, section 66(2)(c)(i).

¹⁸ The impact of diffuse nutrient leaching is identified as an aspect of regionally significant issue number 1 on page 1-2 of the One Plan.

- (c) Section 30(1)(c) – the control of land use for the purpose of:
- i. soil conservation;
 - ii. maintenance and enhancement of the quality of water in water bodies and coastal water;
 - iii. maintenance and enhancement of ecosystems in water bodies and coastal water; and
- (d) Section 30(1)(f) – the control of discharges of contaminants into or onto land or water.

4.3 RMA Part 2 Purpose

7. The purpose of the RMA is set out at section 5:

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

8. In my opinion, PC2 requires some refinement to be fully in accordance with the RMA's sustainable management purpose because, in the terms expressed in Part 2:

- (a) As publicly notified, PC2 will assist Horizons to manage the use and development of natural and physical resources, but not in a way that fully enables people and communities to provide for their social, economic and cultural well-being. I discuss the reasons for this conclusion in later chapters of this report. I recommend (in Chapters 18 to 22 of this report) amendments to PC2 that I consider are necessary

to enable people and communities to better provide for their social, economic and cultural well-being in accordance with the RMA's purpose;

- (b) The amendments I recommend will 'tighten' the regulatory settings of PC2, resulting in greater certainty about the regulatory requirements applicable to existing IFLU activities and greater certainty about the N leaching loss reduction anticipated to result through regulation. This will better sustain the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations than PC2 as publicly notified;
- (c) The One Plan regulatory framework for managing the diffuse N leaching from existing IFLU activities seeks to make a contribution to safeguarding the life-supporting capacity of water, soil and ecosystems. The One Plan IFLU provisions are not the sole means by which life-supporting capacity is to be safeguarded. PC2 will also contribute to safeguarding the life-supporting capacity of water, soil and ecosystems because it requires reductions in N leaching and seeks to address other contaminants (phosphorus, sediment and bacteria). The amendments I have recommended in this Section 42A Report will improve PC2's (and the One Plan's) capability to safeguard the life-supporting capacity of water, soil and ecosystems;
- (d) PC2 proposes a workable framework for identifying, remedying, or mitigating the adverse effects of diffuse discharges from existing IFLU activities. The amendments I recommend in the Section 42A Report will better enable Horizons to avoid, remedy or mitigate these adverse effects.

4.4 RMA Principles

9. Part 2 of the RMA is supported by the principles set out in section 6, 7 and 8 of the RMA, of which the following are particularly relevant:

- (a) The requirements of section 6 to recognize and provide for:
 - **6 (a)** – the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate use and development;
 - **6 (e)** – the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;
 - **6 (g)** – the protection of protected customary rights.
- (b) The requirements of section 7 to have particular regard to:
 - **7(a)** – kaitiakitanga;
 - **7(aa)** – the ethic of stewardship;
 - **7(d)** – intrinsic values of ecosystems;

- **7(f)** – maintenance and enhancement of the quality of the environment;
- **7(g)** – any finite characteristics of natural and physical resources (which is relevant to the limits to the absorptive capacity of freshwater);
- **7(h)** – the protection of the habitat of trout and salmon (acknowledging that trout habitat is listed as a value relevant in some of the water management sub-zones that are the subject of PC2).

(c) The section 8 requirement to take into account the principles of the Treaty of Waitangi (te Tiriti o Waitangi).

10. I discuss these RMA principles, where relevant, in Chapters 6 to 24 of this report.

4.5 Sections 32 and 32AA of the RMA

11. PC2 is supported by an evaluation report prepared for the purpose of section 32(1). I have previously referred to this in my report as the Section 32 Report. That report is available on the Horizons website. I note that some submitters are critical of aspects of the s 32 report published with PC2, including:

- (a) the extent of assessment of the impacts of PC2 on existing commercial vegetable growing in the Region;
- (b) the extent of assessment of the actual costs and uncertainties associated with obtaining consents and the scope of mitigation measures expected to be required by consents issued under the PC2 provisions (the cost of compliance); and
- (c) the impact of the PC2 provisions on surface water quality in and downstream of the priority water management sub-zones.

12. Horizons has commissioned further work to respond to submissions and further submissions, with further assessment to support initial analysis now contained in the section 42A reports of Abby Matthews, Tim Cox, Ton Snelder, Stephen McNally, Anne-Maree Jolly, David Horne, Heather Collins and Peter Clough.

13. In Chapter 24 of this report, I provide a further evaluation of the amendments I propose for the purposes of section 32AA. I address the requirements of section 32AA and the relevant evaluation considerations, informed by the technical reports supporting PC2, the further work commissioned by Horizons, the joint witness statements resulting from expert conferencing and the s 42A reports of Horizons' experts.

4.6 National Policy Statement – Freshwater Management 2020

14. The 2017 version of the NPS-FM was relevant at the time PC2 was developed and publicly notified. The August 2020 NPS-FM was gazetted on 3 August 2020 and came into force on 3 September 2020.
15. Section 22 of the Resource Management Act 2020 inserted a new ‘freshwater planning process’ in section 80A of the RMA. Section 80A(4) requires Horizons to publicly notify the freshwater planning instrument that is intended to give effect to the NPS-FM 2020 no later than 31 December 2024. As explained in Dr Peet’s s 42A report, Horizons has commenced the process intended to review the One Plan which will result in the freshwater plan to give effect to the NPS-FM 2020. Given its highly confined purpose, PC2 was not promulgated as a plan change to give effect to the NPS-FM 2017.
16. Part 4 of the NPS-FM 2020 requires that local authorities must give effect to the NPS-FM 2020 as soon as reasonably practicable. This needs to be read in conjunction with the freshwater planning process set out above. In my opinion, the requirement to give effect to the NPSFM 2020 “as soon as reasonably practicable” does not mean that the NPS-FM must be given effect to within PC2. Putting aside the specific purpose of PC2, there is a problem of timing. PC2 could not have been prepared in accordance with the NPS-FM 2020, which did not take effect until approximately the date of the Section 42A Report. Unless the NPS-FM 2020 itself directs that certain provisions are to be included in plans¹⁹, the RMA Schedule 1 process must be used to amend plans to give effect to the NPSFM. Dr Peet has set out the process Horizons is embarking on with its work programme to implement the NPSFM 2020. Horizons is also reviewing the NPSFM 2020 and the NES-FM 2020 to ensure that where matters are directed to be included in plans, they are. The Hearing Panel will be updated on the latter work at the hearing.
17. Having reviewed the NPSFM 2020, most of the policies set out in Part 2.2 of the NPS-FM cannot be given effect until Horizons has concluded the community engagement process Dr Peet describes in his section 42A report. This illustrates the timing issue I have addressed above. I have had regard to the objective of the NPSFM, as well as some of the policy suggestions around domestic food supply, which fall squarely in the realm of issues raised through submissions on behalf of the Horticulture sector.
18. Importantly, PC2 will not prevent Horizons from giving effect to the NPSFM 2020. Horizons must look afresh at the issues, in light of the new NPSFM, and Dr Peet has indicated that the nutrient management framework will be part of that review. The PC2 provisions cannot bind the content of that future review or any proposed plan change(s) intended to implement the NPSFM. They will prevail only until the One Plan

provisions are superseded by whatever provisions emerge from the future 'freshwater planning instrument' and freshwater hearings process required by the amended RMA.

19. The RMA Planning experts agreed, at their second expert conferencing session on 20 August 2020, that PC2 is a 'transitional plan change'. That is, it is not proposed to give effect to either the 2017 or NPS-FM 2020. The experts agreed that the only aspect of the NPS-FM 2020 that is directly relevant for PC2 is the objective (set out on 9 of the NPS-FM), which states:

The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way that prioritises:

- (a) first, the health and well-being of water bodies and freshwater ecosystems*
- (b) second, the health needs of people (such as drinking water)*
- (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.*

20. In my opinion, PC2 contributes positively to this objective because:

- (a) the N load modelling²⁰ predicts PC2 will generally result in reduced in-river SIN, thereby contributing to an improvement in the health, well-being and mauri of water bodies (albeit to a small degree as described by Dr Snelder);
- (b) the predicted reduction in in-river SIN will contribute (again, to a small degree) to improving the health of water used by people, including for cultural purposes; and
- (c) PC2 addresses an acknowledged conflict within the One Plan framework that will enable people and communities to continue to make use of land and meet their economic aspirations (albeit moderated by the limits imposed by PC2).

21. The refinements to PC2 that I recommend in Chapters 18 to 22 of this report will enhance these contributions.

4.7 National Policy Statement – Urban Development Capacity 2020

22. The National Policy Statement on Urban Development 2020 came into effect on 20 August 2020. It replaced the National Policy Statement on Urban Development Capacity 2016. The objectives of this NPS are:

²⁰ Discussed in the section 42A reports of Abby Matthews and Ton Snelder and in Snelder et al 2020.

Objective 1

New Zealand has well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.

Objective 2

Planning decisions improve housing affordability by supporting competitive land and development markets.

Objective 3

Regional policy statements and district plans enable more people to live in, and more businesses and community services to be located in, areas of an urban environment in which one or more of the following apply: the area is in or near a centre zone or other area with many employment opportunities the area is well-serviced by existing or planned public transport there is high demand for housing or for business land in the area, relative to other areas within the urban environment.

Objective 4

New Zealand's urban environments, including their amenity values, develop and change over time in response to the diverse and changing needs of people, communities, and future generations.

Objective 5

Planning decisions relating to urban environments, and FDSs, take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

Objective 6

Local authority decisions on urban development that affect urban environments are: integrated with infrastructure planning and funding decisions; and strategic over the medium term and long term; and responsive, particularly in relation to proposals that would supply significant development capacity.

Objective 7

Local authorities have robust and frequently updated information about their urban environments and use it to inform planning decisions.

Objective 8

New Zealand's urban environments: support reductions in greenhouse gas emissions; and are resilient to the current and future effects of climate change.

23. Palmerston North is identified (in the Appendix to the NPS) as a 'tier 2 urban environment'. All of the policies and implementation tasks that flow from the above objectives relate to 'urban environments'. None of the implementation tasks are required to be completed before July 2021. Although this NPS was identified in the RMA Planning experts' conferencing session (20 August 2020) as potentially relevant, I have not identified anything in the NPS-UDC that bears directly on PC2.

4.8 New Zealand Coastal Policy Statement 2010

24. The RMA Planning experts agreed at conferencing on 29 July 2020 that a number of the objectives and policies of the NZCPS are relevant to the extent that they relate to the influence of PC2 on the coastal environment. The full wording on these objectives and policies is contained in **Attachment B1**. They include:
- Objective 1 (water quality, biological processes and resilience)
 - Objective 3 (Treaty of Waitangi)
 - Objective 6 (coastal resources should not be compromised by activities on land)
 - Policy 2 (Treaty of Waitangi, tangata whenua and Māori heritage)
 - Policy 3 (precautionary approach)
 - Policy 4 (integration)
 - Policy 5 (land or waters managed or held under other Acts)
 - Policy 21 (enhancement of water quality)
 - Policy 22 reducing sources of contamination)
25. These objectives and policies can be considered relevant insofar as they relate to the influence of PC2 over the degree of contamination of surface water, groundwater, coastal lakes and the coastal marine area and over land use in the coastal environment.
26. I have taken into account the supporting water quality state and trend information, the s 42A reports of Dr Ton Snelder and Ms Abby Matthews, and the likely marginal improvement anticipated by implementation of the PC2 regulatory framework.
27. Based on the above information and with the amendments I recommend to PC2, I am of the opinion that the plan change will facilitate a modest reduction in contaminant loads in water bodies flowing to and through the coastal environment. In this way PC2 will be in accordance with Objective 2 of the NZCPS and will allow Horizons to administer the One Plan IFLU provisions in a way that is in accordance with Objective 3 of the NZCPS. PC2 will also enable use and development, including in the coastal environment, without compromising (rather, seeking to improve) the quality of resources in the coastal environment. The amendments I have recommended to PC2 will also better ensure that relevant cultural values are considered in the decision-making framework for IFLU activities, including in the coastal environment.
28. Although there is some uncertainty as to the extent of water quality improvements that will arise from PC2 for surface water, groundwater, lake and estuary environments – the expectation is that regulating existing IFLU activities to reduce N leaching loads, sediment, bacteria and other nutrients within and upstream of the coastal environment will contribute to water quality improvement in the coastal environment.
29. On that basis I expect that PC2 will contribute positively to the outcomes listed in Policy 3. With the amendments I recommend in the Section 42A Report, PC2 will be framed

in a way that contributes more positively to enhancing water quality outcomes in accordance with Policies 21 and 22.

4.9 National Environmental Standards for Freshwater Regulations 2020

30. The National Environmental Standards for Freshwater Regulations 2020 (NESFM) were gazetted on 3 August 2020, with a commencement date of 3 September 2020.
31. Subparts 2 and 4 of the Regulations are potentially relevant for PC2. Subpart 2 includes Regulations 15 to 25 which control the conversion of land for dairy farming purposes (and these Regulations come into force on 3 September 2020). Subpart 4 introduces limits on synthetic nitrogen to pastoral land, which is an input of N relevant for PC2.

Subpart 2

32. The NESFM introduces restrictions on further agricultural intensification (conversions from forestry to pastoral land use, conversions of farm land to dairy farming, irrigation of dairy farm land, or use of land as 'dairy support' land) over certain thresholds) over certain limits. Those limits are set out in Regulations 16 to 23.
33. Where those limits are exceeded, restrictions apply under Regulation 24, with a consent authority only able to grant consent if granting the consent will not result in an increase in contaminant loads in the catchment or increase in contaminant concentrations in surface water, compared with contaminant loads and concentrations as at 2 September 2020. Regulation 24(2) also states that any resource consent granted for discretionary activity intensification must be for a term that ends before 1 January 2031. Regulation 6(1) provides that a regional plan may be more stringent than the Regulations.
34. The operative Chapter 14 framework allows new and existing IFLU activities to leach 'up to' the maximum CNLM set in Table 14.2. For example, an existing IFLU that has consent for a N leaching rate less than Table 14.2 could (theoretically) apply for consent for the maximum CNLM specified in Table 14.2. PC2 does not alter that ability. However, the NESFM restrictions on additional dairy farm and dairy support area and on additional irrigated area may address this issue. While the NESFM does not prevent Horizons having more stringent rules, the One Plan cannot be more lenient. Horizons must amend a rule in a plan that conflicts with a provision in a NES and must do so without using the RMA Schedule 1 process.²¹ Horizons is currently considering what changes are required to the One Plan to implement the NES-FM requirements. Those changes will be in addition to, and may override, the PC2 provisions, with Horizons

²¹ RMA Sections 44A(3) to 44A(5).

having the ability to address any rules necessitating change without using Schedule 1. Where there are changes relevant to PC2, they will be reported on at the hearing.

35. Helpfully, the N load modelling considers a scenario ‘proposed consented strict’. This scenario involves all consented IFLU activities being held to their authorised N leaching limits, where these are less than the Table 14.2 limits. The modelling results, summarised in Table 3 of the Land, Water People report (August 2020), indicate that the mean relative difference (exceedance of Schedule E targets) would be less under the ‘strict’ scenario compared with all PC2 scenarios. The ‘strict’ scenario is conservative (caps all consented IFLU22 activities at their consented leaching rates) but provides an indication of the likely outcome of implementing the NES-FM.

Subpart 4

36. Subpart 4 introduces a ‘nitrogen cap’, limiting the application of synthetic nitrogen to pastoral land to a maximum rate of 190kg/ha/year (Regulation 33). Consent is required as a non-complying activity to exceed the annual application rate (Regulation 34). The One Plan is concerned with N outputs from farming systems. The Subpart 4 nitrogen cap is an input limit. The two are not in conflict and can be simultaneous so there is no apparent conflict. Associate Professor Horne can speak to this matter if required.

4.10 Relevant RPS and Regional Plan Objectives and Policies

37. I have reproduced the relevant objectives and policies in **Attachment B1**. My assessment is that the changes proposed by PC2 give effect to the relevant higher order RPS objectives and are consistent with the RPS and the other regional plan policies that are not altered by PC2. In later chapters of this report, I recommend amendments to PC2 and am satisfied that these will allow PC2 to better give effect to the relevant higher order objectives.

4.11 Relevant Iwi Management Plans

38. The Section 32 Report lists six iwi management plans (‘taiao’ management plans) which must be taken into account when making decisions under the RMA. These documents will be supplied to the Panel electronically. I identify in the list below the key provisions that potentially interact with PC2.

²² Most consented IFLU activities are dairy IFLU (which is what the NES-FM further restricts).

Ngāti Rangi Taiao Management Plan (2014)

- (a) Page 25: erosion and sedimentation and land use that is inappropriate for the LUC class are identified as environmental issues;
- (b) Page 26: the objectives include *'Land is used and managed in a way that is appropriate to its Land Use Capability Class'*;
- (c) Page 29 (Ngā Ture – Rules): 2.6.1.1 (consent authorities will include conditions to appropriately manage erosion-prone areas); 2.5.1.1 (resource consent will not be granted where it allows land to be used beyond its LUC classification); and 2.5.1.2 (resource consent will not be granted by local authorities for intensification of land use unless that consent includes nutrient benchmarking and effective nutrient management mechanisms);
- (d) Page 33: water quality is identified as an issue (including contamination by leaching and run-off and non-point source);
- (e) Page 34: objectives include: *'There are no discharges (point source or non-point source) that impact on water quality'*;
- (f) Page 35: 4.2.3 (there should be no impact on mauri or ecology from point or non-point source discharges to water); and 4.2.4 (supports buffer zones around horticultural crops); and
- (g) Page 38: objectives include: *'Horticulture is conducted in a sustainable, zero impact manner'*, and rules include *'consenting authorities will not grant consent for horticultural activities where that consent allows discharges (diffuse or otherwise) of nutrients, agrichemicals or sediment'*.

Ngāa Rauru Kiitahi Puutaiao Management Plan

- (a) Sets out expectations of relationships with central and local government agencies including Horizons; and
- (b) Page 16: objectives include 3.1 *'ensure that the realm of Maru is managed appropriately in accordance with Ngāa Raurutanga policies'*; Policy 3.1 *'TKOR will advocate for water users and decision makers to work collaboratively to develop sustainable solutions to water management, access, allocation, decision making and monitoring'*, Policy 3.3 *'All discharges of pollutants or contaminants to water should be avoided'*, and policies and methods relating to the fencing of riparian margins.

Te Kāuru Eastern Manawatū River Hapū Collective Te Kāuru Taiao Strategy (2016)

- (a) Page 7: identifies that the purpose is to guide hapū and RMA officers in decision making in all matters that impact air, water, land and all life forms in Eastern Manawatū catchment;
- (b) Strand 2: sets out the values and includes a table summarising water state in terms of cultural health indicators (including for water health);
- (c) Table 4: strategies (including for water quality); and
- (d) Page 37: discussion of land use, land retirement, Table 14 actions for sustainable land use.

Ngāti Maniapoto Ko Tā Maniapoto Mahere Taiao (there are no targeted water management sub-zones in this rohe)

Ngati Tuwharetoa Iwi Environmental Management Plan (there are no targeted water management sub-zones in this rohe)

Ki Uta, Ki Tai, Ngā Puna Rau o Rangitīkei, Catchment Strategy and Action Plan (2019)

- (a) Page 5: The Awa, its tributaries and ecosystems are revitalised and cared for by Hapū and Iwi alongside the rest of the community through focusing decision making on ensuring the mauri of the Awa is maintained and enhanced. A holistic approach focussed on a healthy and resilient Awa, flourishing flora and fauna, and taonga species at sustainable levels Hapū and Iwi can fully express their kaitiakitanga;
- (b) Page 9: why catchment planning is needed;
- (c) Page 24: Strategic Goals (The Awa, its tributaries and ecosystems are revitalised and cared for by Hapū and Iwi alongside the rest of the community, Hapū and Iwi can exercise their tikanga and values on, in and about the Awa and its tributaries. A healthy river equals healthy people; and
- (d) Page 32: Hapū and Iwi management plans across the catchment by 2021 and implemented by 2028 (with specific actions and strategic alliances identified).

39. I have taken into account all of the above provisions which I consider relevant. While I do not consider it appropriate within this plan change to achieve a zero-impact

objective, I note that approach in PC2 is broadly consistent with the objective of maintaining the Mauri of the Awa. I also note that PC2, including the revisions to Table 14.2, is consistent with the objectives of ensuring that land is used in a manner that recognises its capability in terms of LUC.

4.12 Rangitikei River Water Conservation Order

40. The Rangitikei River Water Conservation Order came into force in 1993. It identifies the outstanding (wild and scenic, recreational, fisheries and habitat) characteristics and features of the Rangitikei river. Section 4 of the Order identifies waters in the upper and middle river that are to be protected and specifies water quality standards to be met by applications for consent. The Order controls and manages resource consents, rather than plan development (although it clarifies the in-river standards required to be achieved). I do not identify anything within PC2 that is inherently inconsistent with the Order.

4.13 Treaty Settlement Acts

41. At the time PC2 was considered by Horizons, there were seven Claims Settlement Acts:
- (a) Ngaa Rauru Kaitahi Claims Settlement Act 2005;
 - (b) Ngāti Apa (North Island) Claims Settlement Act 2010;
 - (c) Ngati Toa Rangatira Claims Settlement Act 2014;
 - (d) Rangitāne o Manawatū Claims Settlement Act 2016;
 - (e) Te Awa Tupua (Whanganui River Claims Settlement) Act 2017;
 - (f) Rangitāne Tū Mai Rā (Wairarapa Tamaki nui-ā-Rua) Claims Settlement Act 2017;
and
 - (g) Ngāti Tūwharetoa Claims Settlement Act 2018.
42. The Ngāti Rangi Claims Settlement Act came into force on 1 August 2019 (just after PC2 was publicly notified). It will be relevant for the Panel's decision making and its requirements are discussed in Chapter 10 of this report.
43. Copies of these Acts will be supplied to the Panel electronically.

Ngāa Rauru Kītahi Claims Settlement Act 2005

44. Section 45 requires consent authorities to record the statutory acknowledgement on statutory plans (including regional plans) that relate to the statutory acknowledgement areas. The One Plan does this already. Section 42 requires consent authorities to have regard to the statutory acknowledgements in relation to applications for resource consent. There appear to be no additional requirements for plan changes.

Ngāti Apa (North Island) Claims Settlement Act 2010

45. Section 32 requires consent authorities to record the statutory acknowledgement on statutory plans that relate to the statutory acknowledgement areas. The One Plan does this already. Section 29 requires consent authorities to have regard to the statutory acknowledgements in relation to applications for resource consent. There appear to be no additional requirements for plan changes.

Ngati Toa Rangatira Claims Settlement Act 2014

46. Section 34 requires consent authorities to record the statutory acknowledgement on statutory plans that relate to the statutory acknowledgement areas. The One Plan does this already. Section 31 requires consent authorities to have regard to the statutory acknowledgements in relation to applications for resource consent. There appear to be no additional requirements for plan changes.

Rangitāne o Manawatū Claims Settlement Act 2016

47. Section 32 requires consent authorities to record the statutory acknowledgement on statutory plans that relate to the statutory acknowledgement areas. The One Plan does this already. Section 29 requires consent authorities to have regard to the statutory acknowledgements in relation to applications for resource consent. There appear to be no additional requirements for plan changes.

Te Awa Tupua (Whanganui River Claims Settlement) Act 2017

48. Section 14 of Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 declares Te Awa Tupua to be a legal person. Section 15 requires any person exercising or performing a function, power or duty under the RMA in relation to changing a RPS or regional plan for the Whanganui River catchment, to recognise and provide for the Te Awa Tupua status and for Tupua te Kawa (these are defined terms in sections 12 and 13 of the Act). The decision maker is required to expressly state how the decision maker has recognised and provided for Te Awa Tupua status and for Tupua te Kawa (s 15(6)). For all other RMA functions, decision makers are required to 'have particular regard to' Te Awa Tupua and Tupua te Kawa. Section 37 also requires RMA decision makers to

have particular regard to Te Heke Ngahuru, which is a strategy document that has yet to be published that will identify issues (including environmental issues).

49. There are no targeted water management sub-zones in the Whanganui River catchment. While the changes to the existing IFLU policies and rules which are amended and proposed by PC2 do not affect the Whanganui River catchment, the recalibrated CNLM values in Table 14.2 will apply to new IFLU activities in the catchment. However, it is my opinion that the recalibration will have neutral impact on catchment values. It represents a change in the way N leaching is described (modelled), rather than any actual increase in N leaching. This matter is described further in the section 42A technical reports prepared by Dr Hanly and Associate Professor Horne.

Rangitāne Tū Mai Rā (Wairarapa Tamaki nui-ā-Rua) Claims Settlement Act 2017

50. Sections 29 and 33 require consent authorities to record the statutory acknowledgement on statutory plans that relate to the statutory acknowledgement areas. The One Plan does this already. Section 30 requires consent authorities to have regard to the statutory acknowledgements in relation to applications for resource consent. There appear to be no additional requirements for plan changes.

Ngāti Tūwharetoa Claims Settlement Act 2018

51. Sections 34 and 42 require consent authorities to record the statutory acknowledgement on statutory plans that relate to the statutory acknowledgement areas. The One Plan does this already. Sections 31 and 40 require consent authorities to have regard to the statutory acknowledgements in relation to applications for resource consent. There appear to be no additional requirements for plan changes.

4.14 Other Policy Direction

Lake Horowhenua Accord - Te Kawenata o te Roto o Horowhenua

52. The Lake Horowhenua Accord was set up in 2013 as a collaborative partnership between; The Lake Horowhenua Trust, Horowhenua Lake Domain Board, Horowhenua District Council, Horizons Regional Council, and Department of Conservation. It is a non-statutory, voluntary, statement of intention between the parties.
53. The aim of the Accord is to provide leadership in remediating decades of poor environmental management in and around Lake Horowhenua, and prevent any further degradation. The overarching purpose of the Accord is “coming together to resolve, once and for all, the condition of Lake Horowhenua”.
54. The specific objectives of the Accord are to:

- (a) Return Lake Horowhenua as a source of pride for all people of Horowhenua;
 - (b) Enhance the social, recreational, cultural and environmental aspects of Lake Horowhenua in a fiscally responsible manner that will be acceptable to the community of Horowhenua;
 - (c) Rehabilitate and protect the health of Lake Horowhenua for future generations;
and
 - (d) Consider how to respond to the key issues, management goals and the 15 guiding action points the Accord partners have agreed upon.
55. The Accord developed a management plan based on fifteen key management actions that will be implemented to progress the restoration of Lake Horowhenua. The key management actions include: land use management throughout the Horowhenua Catchment, lake level management initiatives such as weed harvesting, riparian enhancement, establishment of fish passes, and development of cultural monitoring programs based on Muaūpoko values.

Manawatū River Leaders' Accord

56. The Manawatū River Leaders' Accord (2010) is a collaborative agreement between 34 signatories who make up the Manawatū River Leaders' Forum. The signatories include local government, iwi/hapū, and Massey University, as well as a range of farming, industry, recreation, and environmental organisations who have interests in or impacts upon the Manawatū River and its tributaries.
57. The main goal of the Manawatū River Leaders' Accord is to improve "the mauri (life-force) of the Manawatū River Catchment, such that it sustains fish species, and is suitable for contact recreation, in balance with the social, cultural, and economic activities of the catchment community". The Manawatū River Leaders' Accord is a non-statutory, statement that sets out a vision for improving the health of the Awa.
58. The Accord meets at least twice yearly to discuss concerns and build the relationships between key stakeholders. In 2011 the Accord produced an Action Plan (updated in 2016) which identifies the following seven key action areas:
- (a) Reduce the nutrient and bacteria from point source discharges;
 - (b) Reduce sediment run-off from erosion prone farmland, the rural road network, and areas of major earthworks;
 - (c) Prevent over-use of water;

- (d) Reduce the impact of flood control and drainage schemes;
 - (e) Reduce the run-off of sediment, nutrients and bacteria from intensive land-use such as dairying and cropping;
 - (f) Protect areas of habitat for native fish, birds and trout; and
 - (g) Increase awareness of the challenges faced by freshwater and actions the community can take.
59. The Action Plan then sets out an implementation strategy made up of over 100 specific tasks based on these key action areas. The implementation strategy identifies the implementation responsibilities of signatories as well as specific evaluation criteria and implementation time frames.

4.15 Overall Direction of Higher Order and Other Policy Instruments

60. The higher order policy instruments all seek improved outcomes for land management and for water quality in surface water, groundwater, lakes and the coastal marine area. My assessment is that PC2 gives effect to or is consistent with the higher order policy instruments.

5 Issues Raised in Submissions and Requested Relief

1. Conceptually, the issues raised in submissions and further submissions can be grouped into the following themes:
 - (a) Full or partial support for PC2;
 - (b) Opposition in principle to PC2 and requests to withdraw PC2;
 - (c) Support and opposition to PC2, questioning the relationship between the Table 14.2 CNLM limits and 'in-river' water quality;
 - (d) Opposition to PC2 due to concerns about impacts on water quality and the risk that PC2 will not do enough in terms of water quality;
 - (e) Opposition to PC2 based on concerns that the development of PC2 and the Section 32 Report have not considered, or adequately considered, values of significance to tangata whenua, including concerns about the adequacy of the Schedule 1 pre-notification process of consultation with iwi authorities;
 - (f) Opposition in principle to the One Plan nutrient management approach and its reliance on 'land use capability' (and a suggested alternative approach proposed by Dairy NZ (S40) and Federated Farmers NZ (S58));
 - (g) Opposition in principle to PC2 on the basis that it does not properly consider the particular requirements of commercial vegetable growing throughout the Region or the benefits of CVG for domestic food supply and requests for a tailored alternative approach for CVG (with suggested alternative approaches proposed by Woodhaven Gardens Ltd (S57), Horticulture NZ (S66) and Potatoes NZ (S75));
 - (h) Concerns by the Region's territorial authorities that PC2 does not provide for IFLU activities associated with land irrigation of treated municipal wastewater (and Fonterra's concerns as a further submitter that PC2 does not provide for IFLU activities associated with land irrigation of treated industrial wastewater);
 - (i) Concerns about consenting uncertainties and cost;
 - (j) Concerns about the utility of Overseer;
 - (k) Concerns about the lack of precise definition of 'good management practices' and their efficacy in reducing N leaching;

- (l) Concerns about the requirement for an annual 'nutrient management plan' and who should be able to prepare these;
 - (m) Specific concerns about Methods 5-12 and 5-13;
 - (n) Specific concerns about the proposed changes to RPS Policy 5-8;
 - (o) Specific concerns about the proposed changes to Regional Plan Policies 14-3, 14-5 and 14-6;
 - (p) Specific concerns about the changes proposed by PC2 to the Chapter 1 rules; and
 - (q) Specific concerns about Table 14.2.
2. I have addressed the issues raised on a grouped basis and evaluate them in the following Chapters 6 to 23 of the Section 42A Report.
 3. I include in **Attachment E1** to this report a table summarising all submission points and further submission points. The table contains my recommendation on each submission point and further submission point (to accept, accept in part, or reject those points), and I reference the chapter of this report where each submission point is discussed.
 4. I attach in **Attachment E2** to this report a table that sets out the changes requested by submitters to the publicly notified PC2 provisions. The table contains all wording changes requested by individual submitters where they made specific requests. The purpose of the document is to set out (as closely as practicable on one page) the various wording changes proposed by submitters for the purpose of comparison.
 5. The table does not include submissions which made a general request for amendment but supplied no wording suggestion. It also does not detail the requests made by some submitters for amendments to other parts of the One Plan not addressed by PC2 or for wholly new additional policies and rules. These are contained in the original submissions and are generally most easily read as a whole, in the stand-alone format set out in those submissions (for example, as attachments to the submissions of Dairy NZ (S40), Federated Farmers NZ (S58), Woodhaven Gardens Ltd (S57), Horticulture NZ (S66), Potatoes NZ (S75) and Palmerston North City Council (S83)).

6 Full or Partial Support in Principle for PC2

1. This section addresses submissions that support or partially support PC2, which are summarised in the table below:

Submitter	Sub No.	Summary of Reasons for Support in Principle	Supported and Opposed (in part or entirely) by:
Ravensdown	45	Paragraph 1.6: Generally supports PC2 in terms of its goal to address the issues associated with the effectiveness and workability of the One Plan in relation to the management of existing IFLUs and associated nutrient discharges. Also supports the requirement for existing IFLUs to adopt GMP, to prepare and implement NMPs, and the inclusion of a consent pathway for IFLUs that cannot meet Table 14.2 However, also seeks amendments to improve the effectiveness of the provisions (in particular, accommodating future version changes to Overseer).	
Mark Woodruffe	51	Supports PC2: Would be easier to add adjoining land blocks under PC2.	Supported by: Water Protection Society (allow the proposed changes to Table 14.2) FS2.51.1.1
Russell & Karen Phillips	52	The existing One Plan nitrogen rules are not practical or economic to meet. PC2 is more realistic and would be far more effectual and economic in N leaching reduction. However, also supports the submissions of Dairy NZ and Federated Farmers NZ (S40 and S58). Particularly concerned about: – Significant negative effect on rural communities – Cost and practicality (including the cost of obtaining consent) – The effect on farm business of meeting Table 14.2 – Uncertainties associated with submitting and complying with a NMP – Uncertainties associated with future Overseer version changes – The lack of science and monitoring at sub-catchment level and lack of relationship between Table 14.2, N leaching on farm and desired water quality objectives.	
Andrew Day	53	Supports the framework of Table 14.2 and the inherent allocation of scarce resource across	Supported by:

Submitter	Sub No.	Summary of Reasons for Support in Principle	Supported and Opposed (in part or entirely) by:
		entire catchments. Also supports the need to include updates of Overseer. But does not support the particular updated values proposed for Table 14.2.	Water Protection Society (to the extent consistent with S65) FS2.53.1
EDS Fish & Game NZ	54.8 55.1	(EDS para. 9 & 10) (Fish & Game para. 10 & 11) and S54.8: Support the proposed changes to Table 14.2 – but oppose the discretionary activity consent pathway for IFLUs that exceed the Table 14.2 CNLM limits and the associated changes to policies. Fish & Game suggests there should be a limit on the duration of consents granted to exceed Table 14.2.	Supported by: EDS (FS5.54.8, FS5.55.1) WPS (FS2.54.8, FS2.55.1) Opposed by: Potatoes NZ (FS12.54.8)
Forest & Bird	59	Accepts that limited changes to update Table 14.2 may be appropriate, to reflect the latest Overseer version, but considers these should be limited to target catchments in the Tararua District only. Also, the middle lower and coastal Manawātū River and its tributaries should be included as target catchments. It may also be appropriate to include other catchments currently excluded (e.g. the lower Whangāehu). Their exclusion is an oversight.	Supported by: Water Protection Society (FS2.59.1) Director General of Conservation (FS3.59.1) EDS (FS5.59.1) Opposed by: Dairy NZ (FS9.59.1) Federated Farmers NZ (FS11.59.1) Potatoes NZ (FS12.59.1)
Director General of Conservation	61	Para. 3: Supports in principle the update to Table 14.2 but notes there has been no calculation of the likely impacts of the revised table or of the discretionary pathway. It is therefore unclear how PC2 will achieve the One Plan's water quality objectives.	
Water Protection Society	65	Para. 4 (a): Supports most of the intent of PPC2 except the provisions which enable land users to continue using practices which result in N leaching above the maximums specified in Table 14.2 without a time limit. Para. 4 (b): supports the change to Table 14.2 to reflect the updating of Overseer.	
Rangitāne o Tamaki nui a Rua	71.1	Supports PC2 in principle because it improves the workability of the IFLU provision and will better manage IFLU. However, seeks greater consideration of cultural values, methodologies and frameworks.	Supported by: Water Protection Society (FS2.71.1)

Submitter	Sub No.	Summary of Reasons for Support in Principle	Supported and Opposed (in part or entirely) by:
Beef & Lamb NZ	74.14	Part A para. 10: One of the core tenets of BLNZ's policy position is that the natural capital approach should be applied to the management of natural resources. Part B para. 3: supports the intent of the PC2 changes, specifically the management of intensive land uses where over-allocation exists in order to reduce over-allocation so that the management framework achieves the freshwater quality outcomes sought over time. Part B para 4 and S74.14: supports the use of CNLM based on LUC as specified in Table 14.2. Part B para. 6: supports the recalibrated Table 14.2 (to reflect Overseer version upgrade. Part B para. 9: supports the proposed pathway for resource consent for IFLUs that exceed Table 14.2.	Supported by: Water Protection Society (FS2.74.14) Opposed by: Forest & Bird (FS1.74.14) Horowhenua DC (FS33.74.14)
Tararua DC	79.2	Recommendation no. 2 (in both submissions – one received 21.10.19 and the other received 22.10.19): TDC supports an improved pathway to obtain consent.	
Carla Marsden	80.1	Supports PC2, Table 14.2 amendments.	Supported by: Water Protection Society (FS2.80.1.1) Opposed by: Water Protection Society (FS2.80.1.2)

6.1 Relief Requested and Issues Raised

2. The relief requested in submissions is not explicitly stated in all cases, although it is possible to clearly discern where submitters and further submitters either:
 - (a) endorse the recalibration of the Table 14.2 CNLM values only; or
 - (b) endorse the recalibration of the Table 14.2 CNLM values and support the proposed policy changes to facilitate a workable consenting pathway for IFLU activities that exceed the Table 14.2 CNLM values; or

- (c) endorse the recalibration of the Table 14.2 CNLM values and oppose the proposed policy changes to facilitate a workable consenting pathway for IFLU activities that exceed the Table 14.2 CNLM values.
3. While supporting aspects of PC2, some of the submitters raised concern about the absence of a strong causal link between nitrogen leaching, the Table 14.2 values and surface water quality. The Director General of Conservation's submission supports in principle the recalibration of Table 14.2 values but observes that it is unclear how PC2 will achieve the One Plan water quality objectives. Water quality concerns are discussed in Chapter 9 of this report.
 4. The submission of Joanne Heperi, for Rangitāne Takmaki Nui a Rua (Submission No. 71), supports PC2 in principle but observes that PC2 does not consider Mātauranga Māori. The submitter would like Horizons to consider incorporating recognition of the iwi's cultural values, methodologies, and frameworks into the decision-making process for consents, land uses, and monitoring of waterways. These matters are discussed in Chapter 10 of this report.
 5. Andrew Day's submission (No. 53) supports in principle the recalibration of the Table 14.2 CNLM but opposes the specific numbers proposed. His concerns, along with other aspects of the recalibration of Table 14.2, are discussed in Chapter 22 of this report.
 6. The following issues are raised in other submissions:
 - (a) Forest and Bird suggest that the recalibration of Table 14.2 should be limited to target catchments in Tararua District only;²³
 - (b) Forest and Bird observes that there are several catchments that are potentially degraded by IFLU activities that are not captured in Table 14.1.²⁴ The submission proposes that the middle, lower, and coastal Manawatū River and its tributaries and the lower Whangaehu River should be included in Table 14.1 as target catchments for management of N losses from IFLU.²⁵ The submission point acknowledges that more in-depth analysis is required to assess the state and risk of degradation resulting from diffuse land use discharges in these catchments; and
 - (c) The submission by the Water Protection Society supports most of the intent of PC2 except the provisions which enable land users to continue using practices which result in N leaching at levels above the Table 14.2 limits without a time limit.²⁶

²³ Paragraph 12 of Forest & Bird Submission No. 59.

²⁴ Paragraph 24 of Forest & Bird Submission No. 59.

²⁵ Paragraph 16 of Forest & Bird Submission No. 59.

²⁶ Paragraph 4 of Water Protection Society Submission No. 65.

6.2 Discussion: Submissions in Support

7. The submissions in support of PC2 which raised concerns about the link between N leaching, Table 14.2 and surface water quality requested that PC2 be confirmed or confirmed with amendments. The specifics of those amendments are discussed in the chapters of the Section 42A Report addressing individual proposed policies and rules. Consistent with my conclusion on those other matters, it is my opinion that these submissions in support should be accepted.

6.3 Discussion: (a) Confining the Recalibration of Table 14.2 to Tararua District

8. Forest and Bird request that the recalibration of Table 14.2 should apply only in catchments in Tararua District. It says that Horizons should, before applying Table 14.2 to other catchments:²⁷
 - (a) undertake an assessment of the effect of that recalibration on water quality; and
 - (b) investigate whether alternative allocation tables are needed for catchments outside the Tararua District.
9. The recalibration is necessary in all WMSZ for the practical reason that the version of Overseer that was assumed to be available at the time the operative Table 14.2 values were set is no longer available for use. It has been superseded and it is no longer possible for farmers and growers to model their N leaching loss using the version of Overseer that is relevant for comparison with the operative Table 14.2 limits. Requiring IFLU activities to comply with the operative Table 14.2 CNLM limits (by limiting the recalibration to only some water management sub-zones) would perpetuate the problem that Horizons is attempting to address: that the operative limits are based on superseded modelling assumptions that can no longer be replicated in the current version of Overseer and, as a result, would artificially require significantly greater N leaching reduction than was intended by the operative One Plan.
10. Horizons has revisited its water quality assumptions from the Section 32 Report, through the work of Land, Water, People and Streamlined Environmental (“**Land, Water, People**”). Table 3 on page 54 of the Scenario Modelling report of Land, Water, People (“**Scenario Modelling Report**”)²⁸ presents the extent to which the modelled scenarios achieve or do not achieve the Schedule E SIN target for each target WMSZ.
11. When considering a policy framework without a discretionary pathway (i.e. a table change only) the relevant comparison is between the ‘operative Year-20 consented’

²⁷ Paragraph 13 of Forest & Bird Submission No. 59.

²⁸ *Scenario Modelling of Nitrogen Management in Manawatū-Whanganui Region (August 2020)*.

and ‘proposed consented’. Both scenarios assume that all currently consented IFLU activities maintain their authorised N leaching loss and that all other IFLU activities leach up to, but do not exceed, the relevant Table 14.2 limits (with no discretionary activity consent pathway). Table 3 indicates that, under both scenarios, 29 of the targeted WMSZ assessment points do not achieve the Schedule E SIN targets. Table 3 also indicates that the mean margin by which the SIN target is not achieved is greater for the ‘proposed consented’ scenario than for the ‘operative consented’ scenario. This is depicted visually in Figure 13 of the Scenario Modelling Report. However, the text beneath Figure 13 clarifies that this result is confounded by the assumption made for these scenarios that some existing IFLU activities that have actual N leaching loss below Table 14.2 would increase N leaching up to the Table 14.2 limits. It is not certain that this would actually occur and the NESFM now restricts dairy intensification.

12. Table 3 also illustrates that, for all of the targeted WMSZ, the mean relative exceedance of the SIN target is less under the ‘proposed consented’ scenario than under the ‘post-regulation’ and ‘pre-regulation’ scenarios. In other words, applying the recalibrated CNLM limits proposed by PC2 to the remaining unconsented IFLU activities in the targeted water management sub-zones is predicted to contribute towards modest reduction in the mean exceedance of SIN targets in those WMSZ. That outcome gives effect to the RPS objectives and policies for water quality. Retaining the artificially low operative CNLM limits would impose unnecessary costs on some unconsented IFLU activities. This is discussed in the social and economic section 42A technical reports. Also, to the extent that it reinforces the reluctance of some existing IFLU activities to seek consent, it may unnecessarily prolong the occurrence of pre-regulation leaching rates. In my view there is no practical value in retaining the operative CNLM values.
13. In relation to Forest and Bird’s request that alternative allocation tables be investigated, Horizons has commenced its catchment review process to inform its review of the One Plan. That process will respond to the requirements of the NPSFM 2020 and Dr Peet has confirmed in his section 42A report that the merits of the Chapter 14 framework, which includes Table 14.2, will be re-evaluated through that process, in consultation with catchment communities. PC2 does not seek to revisit the purpose of the Table 14.2 CNLM values or to alter their impact relative to land use capability. PC2 sought only to recalibrate the CNLM. The recalibration (statistical) process is discussed in the report of Dr Hanly. In my opinion, the questions about which WMSZ should be regulated through Table 14.1, whether the Table 14.2 approach is the most appropriate, and what level of stringency should be applied through the CNLM limits are best left to the catchment and broader One Plan review, soon to be underway.

6.4 Discussion: (b) Adding Water Management Sub-Zones to Table 14.1

14. PC2 does not set out to provide a complete review of the Chapter 14 IFLU provisions or to extend the rules to apply to existing IFLU activities outside the listed targeted WMSZ.

In my opinion, requests to insert additional WMSZ to Table 14.1 are outside the scope of PC2. The scope of submissions on PC2 is limited to seeking changes to application of Table 14.2 to existing IFLU within the WMSZ as notified, and changes to the policies and rules which seek to ensure that the table is applied to existing IFLU in those areas. The submission is not supported by any detailed analysis of the implications of extending the Chapter 14 policies and rules to include existing IFLU activities in the suggested additional WMSZ. The submission itself states that further detailed analysis would be required. I do not support the requested additions, via PC2, at this time.

6.5 Discussion: (c) Limiting the Duration of Exceedance of Table 14.2 Limits

15. The Water Protection Society and Fish and Game make a valid point about the inequity of enabling IFLU activities that exceed the Table 14.2 CNLM limits to continue to operate with unlimited duration. The concern is that it is inequitable for some land users to be allowed to exceed the Table 14.2 CNLMs for a long period, while others have had to comply or are given a much shorter period over which to achieve compliance.²⁹ They request that there be a maximum 10-year consent duration³⁰ or a maximum 10-year time limit within which IFLU activities should be required to comply with Table 14.2.³¹ From the time submissions were lodged on PC2, the ten-year period these submitters propose would be until October 2029.
16. The One Plan became operative in April 2014. There remain (using Horizons' current best estimates) approximately 167 existing dairy farming IFLU, 48 existing commercial vegetable growing IFLU, 15 existing cropping IFLU and 5 existing irrigated sheep and beef activities that continue to operate without consents.
17. In my opinion, there remains some urgency to regulating the unconsented existing IFLU activities. For the dairy sector, the fact that some farms are regulated and some are not creates an uneven operating market, while delaying potential N leaching improvements. For the other sectors, the delay in achieving potential N leaching improvements is impairing the effectiveness of the One Plan.
18. The Farm Systems experts agreed that GMP could reasonably be implemented within five years (except that, for pastoral systems, the fencing of pastoral land could be achieved within six months and, for commercial vegetable growing, soil nitrogen testing could be achieved within six months).³² They agreed that BMP could take up to ten years to implement. My opinion is that those time frames seem generous, particularly in light of the fact that the requirements of the One Plan have been in force in some targeted WMSZ since July 2014 and were signalled when the proposed One Plan was publicly

²⁹ Paragraph 5 (h) of Water Protection Society Submission No. 65.

³⁰ Requested in relation to Rule 14-2A on last page of Fish & Game Submission No. 55.

³¹ Requested relief item 7 of Water Protection Society Submission No. 65.

³² JWS Farm Systems, 20 and 21 July 2020.

notified in 2012. Also, Dr Anne-Maree Jolly explains in her section 42A technical report that most GMP and some BMP for CVG can be implemented within 3 years.

19. In my opinion existing IFLU activities that have thus far avoided the constraints of regulation should be required to demonstrate a trajectory of reduced N leaching, using GMP and BMP as necessary, as soon as reasonably practicable.
20. One Plan Policy 12-5 establishes 'common catchment expiry' dates for all WMSZ. The policy states that consents issued under sections 13, 14 and 15 of the RMA will generally be set to the common catchment expiry date, or 10-year increments from that date. Policy 12-5 also sets out the considerations to be applied when considering consent durations of shorter or longer duration than requested by an applicant. For the targeted WMSZ listed in Table 14.1, the common catchment expiry dates are as follows:

Targeted Water Management Sub-Zone	Date of Legal Effect of IFLU Rules	First Common Catchment Expiry Date	Ten-Year Increments Of Common Catchment Expiry
Mangapapa Mana_9b	1 July 2014	1 July 2013	1 July 2023, 2033
Waikawa West_9a Manakau West_9b	1 July 2014	1 July 2014	1 July 2024, 2034
Lake Papaitonga West_8	1 July 2014	1 July 2014	1 July 2024, 2034
Upper Mangatainoka Mana_8a Middle Mangatainoka Mana_8b Lower Mangatainoka Mana_8c Makakahi Mana_8d	1 July 2015	1 July 2010	1 July 2020, 2030
Northern Manawatu Lakes West_6 Kaitoke Lakes West_4 Southern Whanganui Lakes West_5	1 July 2015	1 July 2014	1 July 2024, 2034
Coastal Rangitikei Rang_4	1 July 2015	1 July 2017	1 July 2027, 2037
Lake Horowhenua Hoki_1a Hokio Hoki_1b	1 July 2015	1 July 2014	1 July 2024, 2034
Upper Manawatu Mana_1a Mangatewainui Mana_1b Mangatoro Mana_1c Weber-Tamaki Mana_2a Mangatera Mana_2b Upper Tamaki Mana_3 Upper Kumeti Mana_4 Tamaki-Hopelands Mana_5a Lower Tamaki Mana_5b Lower Kumeti Mana_5c Oruakeretaki Mana_5d Raparapawai Mana_5e	1 July 2016	1 July 2011	1 July 2021, 2031
Hopelands-Tiraumea Mana_6 Upper Gorge Mana_9a	1 July 2016 1 July 2016	1 July 2011 1 July 2013	1 July 2021, 2031 1 July 2023, 2033

Mangaatua Mana_9c	1 July 2016	1 July 2013	1 July 2023, 2033
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21. The pattern of common catchment expiry dates varies between targeted WMSZ. Some align well with periods of time 5 or 10 years from 2020 (2025, 2030). Others do not.
22. I consider that there are three aspects to the question of timeliness:
 - (a) the time within which applications for consent should be lodged;
 - (b) the time within which practicable and material reductions in N leaching loss should be achieved; and
 - (c) the duration for which consents should be granted, bearing in mind the imminent review of the One Plan, the widespread continuing failure to meet Schedule E SIN targets and the likely need in that review for enhanced N leaching provisions (including more stringent or more targeted N leaching loss controls).
23. In the interests of achieving reductions in N leaching as promptly as practicable, I suggest that the PC2 policies and rules should be amended to address all three components. Applications should qualify for consent under a controlled activity consent pathway only if lodged within two years, in my view. For CVG, the WSP Report and reporting of Dr Jolly suggests that most GMP measures could be implemented within three years.
24. I also consider additional guidance could be provided on consent duration. I have recommended amendments to insert two alternative controlled activity consent pathways (tailored for dairy and for CVG IFLU activities and discussed in Chapters 11 and 12 of this report). Those alternative controlled activity pathways adopt the key aspects of the requests made by the relevant sector representatives and I am satisfied that they will result in more certainty about the N leaching reduction these sectors will achieve, with a more certain water quality outcome for PC2. It should also mean that many of the currently unconsented IFLU activities could, with some genuine effort to reduce N leaching, achieve consent by way of a controlled activity pathway.
25. For those IFLU activities that cannot or will not achieve the controlled activity N leaching limits, my view is that the discretionary activity pathway should not enable the continuation of high N leaching exceedances for long durations. Long durations would have the effect of 'grandparenting' practices that may be significantly out of step with recent NES regulation. It is reasonable to expect that, with the more explicit and stringent NPSFM 2020 requirements for water quality targets and limits, future One Plan settings to control all water quality contaminants will be more stringent (not less). I support inclusion in Policy 14-6 of an explicit limitation on duration, particularly where persistent high levels of N leaching loss are proposed with no intention to adopt best

management practice, and in all cases, a maximum of ten years. My understanding, from pre-hearing discussions with sector representatives, is that anything less than a ten-year period would erode bank financing confidence and risk business success.

26. A ten-year maximum aligns approximately with the dates by which the NPS-FM 2020 expects water quality targets to be met (the first interim target date required by Policy 3.11 of the NPSFM 2020 is 10 years from 31 December 2024 – i.e. the end of 2034 at the latest). Insertion of a limit on consent duration also aligns with the interim purpose of PC2 and may address some of the concerns of submitters around the suggested unconstrained nature of the PC2 discretionary activity pathway. I detail the wording of the proposed ten-year consent duration limit in Chapter 20 of this report.

6.6 Recommendations

27. For the reasons explained in the foregoing paragraphs, I recommend that:
- (a) PC2 be amended to include in Policy 14-6 a policy restricting a maximum consent duration of ten years, as follows:
 - (a) **14-6 Resource consent decision-making for intensive farming *land^* uses**
 - (b)
 - (c) When determining whether to enable and existing intensive farming *land^* use to continue under (d) (i), have **particular** regard to:
 - (d) ...
 - (e)
 - (i) Consent duration, ensuring that the duration is limited to a period not exceeding ten years, and a shorter duration where continued high cumulative nitrogen leaching from the *land^* is planned without progressive reduction through the use of *best management practice*;
 - (b) The following submission points and the aspects of the following submissions that support PC2 in principle be **accepted in part** to the extent that PC2 is confirmed in amended form:
 - i. Submission points 54.8 (EDS), 55.1 (Fish and Game), 71.1 (Rangitāne o Tamaki nui a Rua), 74.14 (Beef & Lamb NZ), 79.2 (Taranaki DC), 80.1 (Carla Marsden);
 - ii. The submissions of Ravensdown (S45), Mark Woodruffe (S51), Russell Phillips (S52), Andrew Day (S53), Forest and Bird (S59), Director General of Conservation (S61), Water Protection Society (S65);

- iii. The further submission points in support of the submissions listed in (i) and (ii) above;
- (c) The following further submission points that oppose the submissions and submission points listed in (c) (i) and (ii) above be **rejected**:
 - i. FS12.54.8 (Potatoes NZ), FS1.74.14 (Forest & Bird), FS33.74.14 (Horowhenua DC), FS2.80.1.2 (Water Protection Society);
- (d) Submission point 59.1 (Forest and Bird) and further submission point FS5.59.1 (EDS) be **rejected** to the extent that they request the exclusion from Table 14.2 of recalibrated CNLM values for water management sub-zones outside the Tararua District or request separate nitrogen leaching values for water management sub-zones outside the Tararua District; and
- (e) Submission point 59.1 (Forest and Bird) be **rejected** to the extent that it requests the insertion into Table 14.1 of additional water management sub-zones.

7 Requests to Withdraw PC2

1. This section includes my analysis of submissions seeking withdrawal of PC2.

7.1 Relief Requested

2. The submissions of Horowhenua DC (submission point 42.1), Arawhata Wetland Alliance Group (submission number 46) and Forest and Bird (submission point 59.1) request that PC2 be withdrawn or rejected. The submitters consider that, in preparing PC2, Horizons has failed to adequately consult with or take into account the interests of the community, including commercial vegetable growers and that the PC2 process should be replaced with a fresh-start collaborative process.
3. The submissions of EDS (submission no. 54), Fish and Game (submission no. 55) and Forest and Bird (submission point 59.1) are opposed to any consenting for IFLU activities that exceed the Table 14.2 CNLM limits.
4. The submissions requesting withdrawal of PC2 are summarised in the following table:

Submitter	Sub No.	Summary of Reasons	Supported and Opposed (in part or entirely) by:
Ruapehu DC	2.5 2.6	RDC recommends (in addition to deletion of Table 14.2) the development of policies that provide pathways for both existing and new intensive farm land uses, while giving effect to the environmental, cultural, social and economic impacts of the affected water management sub zones.	Supported by: Horowhenua DC (FS19.2.5, FS19.2.6) Supported and opposed in part by: Potatoes NZ (FS12.2.5, FS12.2.6) Opposed by: Forest & Bird (FS1.2.5) Water Protection Society (FS2.2.5)
Horowhenua DC	42.1	PC2 should be withdrawn and transitioned to a collaborative planning process as set out in Part 4, Schedule 1 of the RMA.	Supported in part by: Forest & Bird (FS1.42.1) Horticulture NZ (FS4.42.1) Federated Farmers NZ (FS11.42.1)
Arawhata Wetland Alliance (AWA) Group	46	Requests that PC2 be withdrawn or transitioned to a collaborative planning process as set out in Part 4, Schedule 1 of the RMA (or other similar relief). PC2 fails to take account of the positive benefits of nationally important commercial vegetable growing activities. PC2 is not consistent with RMA purpose and will not meet reasonable foreseeable	Supported by: Potatoes NZ (FS12.46.1) Opposed by: Federated Farmers NZ (FS11.46.1)

Submitter	Sub No.	Summary of Reasons	Supported and Opposed (in part or entirely) by:
		needs of future generations or enable social, economic and cultural well-being of people and communities. Lack of consultation with growers in preparing PC2.	
EDS	54	Do not support the proposed discretionary activity consenting pathway for IFLU activities that cannot meet the recalibrated Table 14.2 limits.	
Fish & Game	55		
Forest & Bird	59.1	The development of a consenting pathway that allows Table 14.2 to be exceeded is contrary to national and regional policy (including NPS-FM, RMA, One Plan, NZCPS). Requests that PC2 is refused in its entirety.	Supported by: Water Protection Society (to the extent consistent with S65 - FS2.59.1) Director General of Conservation (FS3.59.1) EDS (FS5.59.1) Supported and opposed in part by: Potatoes NZ (FS12.59.1) Opposed by: Dairy NZ (FS9.59.1) Federated Farmers (FS11.59.1)

7.2 Discussion: Engagement with Territorial Authorities

5. I have made enquiries about the consultation undertaken with territorial authorities in the development of PC2. I am advised that a meeting was held with Horowhenua District Council on 25 September 2018. A letter was sent to all local authorities on 28 September 2018, signalling the intention to advance PC2 (at that time involving only a recalibration of the Table 14.2 limits). Once Horizons realised that it needed to do address more than just the Table 14.2 recalibration (and to also include policy changes), a letter was sent on 9 April 2019 attaching a summary of the intended scope of the PC2 policy changes. I understand that this fulfilled the requirements of the Triennial Agreement that was in place following the 2019 local authority elections (which was effective from March 2020).

7.3 Discussion: Withdrawal of PC2

6. I do not support withdrawal of PC2. To do so would further delay the benefits that can be derived from regulating IFLU activities to reduce N leaching at the earliest opportunity. Given the requirements for pre-notification consultation and the collaborative process the submitters are advocating, together with the potential for a

highly litigated process, the delay could well be years. Withdrawal of PC2 would mean reversion to the unsatisfactory situation of ambiguity in the regulatory framework under which the consenting process intended by the One Plan has stagnated. The Scenario Modelling Report indicates that regulation of existing IFLU activities with PC2 provides a better surface water quality outcome than no regulation or continued regulatory 'stasis'. This is illustrated in Table 3 of the Scenario Modelling Report; when comparing the 'post-regulation' and 'proposed consented Year-20' scenarios.

7.4 Discussion: Opposition to the Proposed Discretionary Activity Consent Pathway

7. Forest and Bird considers that IFLU activities should be required to meet the Table 14.2 limits, with the exception being where there is a thorough assessment of effects which can meaningfully demonstrate how water quality will be improved. EDS and Fish and Game consider that the proposed Rule 14-2A discretionary activity pathway is vaguely defined (that is, that GMPs, additional innovations and measures and the best practicable option are subjective and poorly defined). EDS and Fish and Game also consider that IFLU activities exceeding the Table 14.2 limits should require consent as non-complying activities (not discretionary activities as proposed in PC2).
8. I agree that the PC2 policy framework lacks specificity about how much exceedance of the Table 14.2 limits will be acceptable to Horizons and about the time frame required for achieving N leaching reductions on individual farms.
9. The joint witness statements of the Farm Systems experts suggest that there is a range of GMPs that should reasonably be expected to be implemented for various farm systems. It is important to understand the different definitions of GMP which have emerged over time. These are explained in the section 42A technical report of Associate Professor Horne. Assuming GMP as understood at the time of the One Plan (which in today's world the experts say is a mixture of GMP and BMP) a good proportion ('most') of the existing IDLU would comply. However, the narrower definition of GMP applied today, as agreed in expert conferencing, would see fewer farmers meeting the Table 14.2. Where GMPs are not sufficient to achieve the Table 14.2 limits, my view is that additional (BMP) measures should be expected to be progressively implemented to achieve meaningful N leaching reduction. Where BMPs can be implemented and will achieve substantive reduction in N leaching within an appropriately urgent time frame, my view is that this should be enabled through an alternative controlled activity consenting pathway (rather than a discretionary activity pathway) in Chapter 14.
10. I do not accept that it will be achievable for an individual IFLU applicant to demonstrate meaningfully that mitigation measures undertaken on a particular farm will result in water quality improvement in the manner expressed in the submissions of Fish and Game and EDS. For a source of diffuse contaminant such as leached N, I would expect

an applicant would be able to estimate the additional N load contribution from the particular IFLU activity, at a WMSZ scale. I would expect it to be extremely difficult to provide a complete assessment of the impact that would have on a range of water quality parameters at different locations within the WMSZ or to differentiate the impact of the individual IFLU activity's contribution from other variables affecting water quality. The exercise of attempting to assess water quality impact (as opposed to simply quantifying N leaching contribution) could be a potentially costly and time-consuming specialist task, even if there is baseline water quality data available at the WMSZ scale. I understand that baseline water quality data is not universally available at that scale.

11. My view is that a comprehensive assessment of effects on water quality would be warranted for an IFLU activity leaching significantly in excess of the Table 14.2 CNLM, where there is reluctance to invest in GMPs and BMPs to mitigate the N leaching, and/or there is no tangible plan of improvement within a reasonable timeframe. There may also be localised conditions that make it extremely difficult to achieve substantive N leaching reductions even with the implementation of GMPs and other mitigations. These circumstances may best be examined in detail through a comprehensive discretionary activity assessment, with the discretion to grant or refuse consent.
12. I can support an alternative controlled activity pathway in situations where meaningful GMP or BMP mitigations are implemented and it is demonstrated that these will result in substantive reductions in N leaching within a short period of time, and with progressive ongoing reduction, that contributes to a cumulative reduction in SIN load at the WMSZ scale. In that case, I can also support a discretionary pathway for applications that fail to meet controlled activity N leaching reductions or time frames.
13. I do not support non-complying activity status for IFLU applications that exceed the Table 14.2 (Chapter 14) limits. The purpose of the Chapter 14 policies and rules is to drive improvement in land management and achieve meaningful reductions in on-farm N leaching that cumulatively contribute to water quality improvement. In general, the requirements of section 104D of the RMA for non-complying activities are considered to create a high threshold for consenting purposes. The opposite is expected of PC2. As I understand it, the intention has never been to create insurmountable consenting hurdles or uncertainty that deters individuals within these sectors from applying for the necessary consents. The purpose of PC2 is to address exactly this issue.
14. In my view, controlled activity and (default) discretionary activity rule settings are sufficient to drive land management improvement and N leaching reduction, provided the requirements for minimum practices, minimum N leaching reduction and tight time frames are specified, together with policies that are clear about the outcome sought. The land use sectors targeted by the One Plan IFLU provisions are only part of the source of SIN in surface water. They are expected to make a contribution to water quality improvement. They cannot be expected to single-handedly 'fix' the entire water quality

problem. I support a regulatory framework that enables and incentivises farmers to make meaningful reductions in N leaching. To do this, the regulatory framework should provide certainty about consent outcomes and the range of mitigation measures required.

7.5 Recommendations

15. For the reasons explained in the foregoing paragraphs, I recommend that:

- (a) The following submission points and the aspects of the following submissions that oppose PC2 in principle and request the withdrawal of PC2 be **rejected**:
 - i. Submission points 2.5, 2.6 (Ruapehu DC), 42.1 (Horowhenua DC), 59.1 (Forest & Bird);
 - ii. The submissions of Arawhata Wetland Alliance Group (S46), EDS (S54) and Fish and Game (S55);
 - iii. The further submission points in support of the submissions and submission points listed in (i) and (ii) above; and
- (b) The further submission points that oppose the submissions and submission points listed in (a) (i) and (ii) above be **accepted in part** to the extent that PC2 is confirmed in amended form; and
- (c) The further submission points of Potatoes NZ that partly support and partly oppose the submissions and submission points listed in (a) (i) and (ii) above be **accepted in part** to the extent that PC2 is confirmed in amended form.

8 Support and Opposition Questioning the Relationship Between Table 14.2 and Water Quality

1. This section provides an analysis of submissions on the relationship of Table 14.2 and water quality.

8.1 Relief Requested

Submitter	Sub No.	Summary of Reasons for Support or Opposition in Principle, Based on Water Quality	Supported and Opposed (in part or entirely) by:
Russell Phillips	52	Supports PC2 as a more practical approach than existing One Plan nitrogen rules but also raises concern about: – The lack of science and monitoring at sub-catchment level and lack of relationship between Table 14.2, N leaching on farm and desired water quality objectives.	
Ian Grant and Shirley Cumming Neil Filer	47 69	Supports the submissions lodged by Dairy NZ and Federated Farmers NZ (s40 and S58). Concerns include: – The lack of science and monitoring at sub-catchment level and lack of relationship between Table 14.2, N leaching on farm and desired water quality objectives.	Opposed by: Water Protection Society (FS2.69.1)

8.2 Discussion of Issues Raised

2. Abby Matthews explains in her section 42A technical report the process Horizons adopted to establish the CNLM limits in Table 14.2. A connection was established at the target catchment scale between land use, diffuse sources of nitrogen and in-river SIN load. For example, non-point (diffuse) source contributions were shown to contribute more than 97% of the SIN loading in the two modelled catchments (Manawatū upstream of Hopelands, and Mangatainoka upstream of SH2).
3. As I understand it, in the preparation of the One Plan, the Table 14.2 CNLM limits were modelled to determine the potential reduction that could result in in-river SIN load. I accept that there is not a direct linear relationship between the Table 14.2 CNLM limits, individual on-farm N leaching and the water quality impacts associated with individual farm leaching. However, this was never the intention of the Table 14.2 CNLM. The relationship was always considered relevant at catchment scale. That remains the case. The LUC approach as the basis for the Table 14.2 limits was litigated, and settled, through the One Plan and PC2 proposes no changes to that fundamental underlying

approach. Submissions 47, 52 and 69 do not request any changes in relation to the concerns they raise but express support for the changes proposed in the submissions of Dairy NZ (S40) and Federated Farmers NZ (S58).

8.3 Recommendation

4. For the reasons explained in the foregoing paragraphs, I recommend that:
 - (a) the aspects of the submissions of Russell Phillips (S52), Ian Grant and Shirley Cumming (S47) and Neil Filer (S69) that raise concerns about the relationship between Table 14.2 CNLM limits, on-farm N leaching loss and water quality outcomes be **accepted in part** to the extent that those submissions otherwise support PC2; and
 - (b) Further submission FS2.69.1 (Water Protection Society) be **rejected**.

9 Opposition to PC2 Based on Concerns About Impact on Water Quality

1. This section provides an analysis of submissions that oppose PC2 based on concerns about its potential impact on water quality.

9.1 Relief Requested and Issues Raised

2. Some of the submissions request the withdrawal of PC2. Other submissions request amendments to the policies and rules to address specific concerns. The relevant submissions are summarised in the following table:

Submitter	Sub No.	Summary of Reasons for Support or Opposition	Supported and Opposed (in part or entirely) by:
Kahungunu ki Tāmaki nui a Rua	4	Page 2: do not support PC2 provisions where they weaken the approach towards managing effects with the aim of improving water quality. Water quality in several rivers throughout the rohe is declining (e.g. Mangatainoka, Makakahi, Manawatu). BPO and GMP do not address these issues. They are an insufficient response to over-allocation (degradation). PC2 enables a greater degree of leniency. Proposed changes to policies mean risk to or delay in water quality improvement. This is inconsistent with the NPS-FM, the One Plan RPS, and s.30 RMA functions.	
EDS Fish & Game NZ	54 55	EDS para. 10, Fish & Game para. 11: PC2 provides a consent pathway for IFLUs that exceed the Table 14.2 LUC limits, and this will enable further degradation of water quality, is not in line with the RMA purpose or RMA s. 30 and does not give effect to the NPS-FM.	
Forest & Bird	59.1	Para. 26: It is unclear what the degree of adverse impact PC2 will have on nutrient (and other contaminant) loads to freshwater, estuarine, and coastal marine environments and their associated values (because the number of applications and the magnitude of exceedance are unknown and uncontrolled by PC2). It is also unclear what the impact of PC2 will be on target catchments outside the upper Manawātū and Mangatainoka. Para. 29: water quality in the Horizons region is in a poor ecological state and PC2 would likely exacerbate this.	Supported by: Water Protection Society (to the extent consistent with S65) FS2.59.1 Director General of Conservation (FS3.59.1) EDS (FS5.59.1) Supported in part and opposed in part by:

Submitter	Sub No.	Summary of Reasons for Support or Opposition	Supported and Opposed (in part or entirely) by:
		Para. 30: PC2 puts many already-degraded lakes at risk of further ecological decline and 'flipping'. Para. 34: Impacts of PC2 on groundwater, estuarine, coastal and marine systems remain unknown. Para. 40 onwards: E2M modelling has the potential to identify on-farm improvements that can reduce N leaching to achieve compliance with Table 14.2 – but appears to have been resisted by Horizons. Para. 47: the existing One Plan CNLM limits are acknowledged to be insufficient to achieve in-stream targets – allowing exceedances can only exacerbate that. Para. 52: There is no evidence to support Horizons' contention that the PC2 provisions require a higher level of GMP controls and that an overall improvement from the status quo should be expected (without clear evidence of water quality benefit). Para. 54: the proposed PC2 approach is not consistent with Te Mana o te Wai, where the needs of the waterbody, hauora and mauri come first as a matter of national significance under the NPS-FM. PC2 is contrary to the NPS-FM, RMA purpose and s. 30 RMA.	Potatoes NZ (FS12.59.1) Opposed by: Dairy NZ (FS9.59.1) Federated Farmers NZ (FS11.59.1)
Director General of Conservation	61	Para. 2 & 3: PC2 overlooks the urgent need to reduce external nutrient loads to many lakes (PC2 contains no assessment of effects on lakes and wetlands and no calculation of catchment load). Para. 4: Lake 'flipping' is a risk. Para. 5–7: Concerned that allowing an unknown number of IFLUs to exceed Table 14.2 limits by an unspecified amount for a potentially indefinite period of time could have adverse effect on threatened species and habitat in the coastal environment. PC2 does not give appropriate consideration to the relationship between freshwater quality and coastal water quality (and is contrary to the NZCPS). Para. 9: the discretionary pathway is ambiguous, lacks clarity and is too permissive. This allows for granting of consents without full consideration or an understanding of the cumulative adverse effects of the activity on water quality. Para. 10: even with the amendments requested by the DG, PC2 will still likely result in adverse	

Submitter	Sub No.	Summary of Reasons for Support or Opposition	Supported and Opposed (in part or entirely) by:
		effects on water quality and may not achieve required national and regional freshwater outcomes.	
	61.15	Ensure that the proposed plan change does not further contribute to the degradation of freshwater and biodiversity values of the coastal lakes and wetlands in the Horizons region.	Supported by: Forest & Bird (FS1.61.15) Water Protection Society (FS2.61.15)
	61.16	Amend the proposed plan change to give effect to the RMA 1991, the National Policy Statement for Freshwater Management 2014, the NZCPS 2010 and the Horizons Regional Policy Statement.	Supported by: Forest & Bird (FS1.61.16) Water Protection Society (FS2.61.16) Opposed by: Federated Farmers NZ (opposes the request to amend PC2 to give effect to the NPS-FM) (FS11.61.16)
Muaūpoko Tribal Authority Inc.	62	Page 1: PC2 policy continues to reinforce the poor environmental management of the Lake Horowhenua catchment that has resulted in degradation of the Lake as a taonga. Page 2: Requests that Lake Horowhenua be removed from PC2.	Supported in Part by Horowhenua DC (FS31.62.1) Opposed by: Director General of Conservation (FS3.62.1.2) Federated Farmers NZ (FS11.62.1)
Ngā Waihua o Paerangi Trust	63	Page 4: PC2 includes potential for increased pressure on Te Waiu o Te Ika and degradation of water. PC2 is not a mere 'technical update'. It opens up a consenting pathway for IFLUs to exceed Table 14.2 by an unknown and unquantified amount of N loss. This carries high potential to result in water quality impact (specifically on the Whangaehu Awa). Would also breach One Plan Schedule B value of Mauri. Page 7: PC2 contains no pathway for monitoring the success or otherwise of using GMP to reduce N leaching, nor any means to require further action if GMPs are failing to adequately protect values. GMPs are not a substitute for compliance with the Table 14.2 CNLM limits. Page 8, bullet-point 1: Whangaehu should be included as a target catchment.	

Submitter	Sub No.	Summary of Reasons for Support or Opposition	Supported and Opposed (in part or entirely) by:
Water Protection Society	65	Para. 5 (e): Allowing some land users to leach higher than Table 14.2, without requiring other land users to leach lower to compensate, is likely to compromise the values of the region's waterways. Para. 5 (l): if neither GMP nor additional measures are sufficient to meet the CNLMs over a reasonable time period, then the activity should not be permitted, if our water quality objectives are to be achieved	
Ngāti Turanga Te Roopū o Ngāti Whakatere Trust Te Rūnanga o Raukawa	67, 68, 70	Section 1: Major frustration for hapū and iwi is the ongoing lack of acknowledgement of iwi concerns in catchments where Taonga are poke and tikanga Māori is unable to be practised..... Surface water quality degradation is identified as the number one issue in the One Plan. The uncontrolled leaching of nitrogen into waterways is particularly unfathomable when the effects are so well understood. Over the life of the plan, run-off and leaching of nutrients, sediment and bacteria from farms has continued as the single largest threat to water quality, ecosystem health and human health in the Region. This continued decline in surface water quality has also degraded the mana and mauri of those awa and roto to a state that no longer provides for the current and future needs of tangata whenua. ...The proposed provisions will not address these issues. Access to and availability of clean water to exercise cultural activities such as food gathering and baptismal rituals have diminished. This is true for whanau of Ngāti Raukawa whose rohe are degraded but are not captured by Policy 14-5 and therefore degradation of Taonga is continuing. Therefore, these rohe must be added into the Regional Plan. In particular, the lower and coastal Manawatū catchment, lower Tokomaru, lower Mangaore, Oroua tributaries, lower Rangitīkei (including the Porewa and Tutaenui tributaries, lower Whangaehu, Makotuku and Turakina catchment) require more in-depth analysis to assess their risk of degradation from diffuse discharges from IFLU.	
Ngāti Turanga Te Roopū o Ngāti	67, 68, 70	Section 2 – Issue (iii): PC2 does not support the Regional Council's function to enhance degraded water quality (s. 30 (1) (c). PC2 does not give effect to the NPSFM but are a step in the wrong direction (the proposed changes will	

Submitter	Sub No.	Summary of Reasons for Support or Opposition	Supported and Opposed (in part or entirely) by:
Whakatere Trust Te Rūnanga o Raukawa		delay water quality improvements). PC2 changes will conflict with the Regional Council's Freshwater Futures plan changes. The changes proposed to the RPS are contrary to the One Plan (will allow the continued degradation of waahi tapu and the mauri of wai, making those taonga culturally unclean). Proposed Rule 14-2A is inconsistent with One Plan Policy 14-9 because it comprises a risk to human health through uncontrolled nitrogen leaching. Any application must be required to meet Table 14.2 unless a thorough assessment of effects can meaningfully demonstrate how water quality will be improved and when this will occur.	
Hokio A Māori Land Trust Tamarangi Hapū of Muaūpoko	76, 84	Requests PC2 be declined: The discharge of nitrates and other contaminants to land and water is an activity that threatens the sustainability of the waahi and taonga tapu of Muaūpoko, resulting in serious adverse effects, including the desecration of waahi tapu, affecting the health and well being of Muaūpoko.	

3. The submissions and further submissions raise the following issues:
- (a) PC2 weakens the approach of managing effects with the aim of improving water quality and will mean risk or delay in achieving water quality improvement;
 - (b) BPO and GMP alone are insufficient to address the serious water quality degradation issues and the discretionary activity consent pathway is ambiguous, lacks clarity, is too permissive and has uncertain outcomes;
 - (c) Providing a consenting pathway for IFLU activities that exceed the Table 14.2 limits will enable increased degradation of water quality;
 - (d) It is not clear what impact PC2 will have on N loads in freshwater, groundwater, wetlands, estuarine and coastal marine environments. PC2 overlooks the urgent need to reduce nutrient loads to lakes and wetlands (no assessment has been made of the potential effects on lakes and wetlands) and, particularly of effects on Lake Horowhenua;

- (e) E2M modelling is a superior alternative approach but has not been considered by Horizons;
- (f) PC2 fails to give effect to the RMA, NPSFM, NZCPS and RPS, is inconsistent with Te Mana o te Wai and will not support Horizons' section 30(1)(c) function of maintaining and enhancing water quality;
- (g) PC2 will result in water quality outcomes that will breach the One Plan Schedule B value of 'mauri';
- (h) Additional WMSZ should be inserted into Table 14.1 and brought into the jurisdiction of the Chapter 14 provisions for existing IFLU activities;
- (i) There is no pathway for monitoring the success or otherwise of using GMPs;
- (j) The Table 14.2 CNLM should be required to be met within a limited time period to ensure water quality improvement is achieved as early as practicable;
- (k) PC2 will not address well-known issues of the effects of leaching and run-off of nutrients, sediment and bacteria from farms;
- (l) PC2 will conflict with Horizons' Freshwater Futures plan change(s);
- (m) PC2 is contrary to One Plan Policy 14-9; and
- (n) The assumptions underlying PC2 fail to quantify the number of IFLU activities operating without consent.

9.2 Discussion: Issue (a) PC2 Policy Approach and Risk to or Delay in Achieving Water Quality Improvement

4. Dr Ton Snelder's section 42A technical report confirms that PC2 would achieve modest water quality improvements in the target catchments.³³ Dr Snelder points out that these improvements, alone, are not sufficient to achieve the One Plan Schedule E water quality targets at most assessment points downstream of the targeted WMSZ. However, as I note elsewhere, this was never the intention and it is accurate to say that PC2 will have a positive impact, generally, and not an adverse impact as these submitters contend.

³³ Paragraph 63 of Section 42A Technical Report of Dr Antonius Snelder (Water Quality and Scenario Analysis (4 September 2020)).

5. In paragraph 56 of his section 42A technical report, Dr Snelder explains that there are areas of IFLU distributed across the Region and under the scenarios described in the Scenario Modelling Report it has been assumed that some of these IFLU could increase their N leaching up to the CNLM in Table 14.2. The modelling indicates that this would produce increases in SIN concentrations at some assessment points. For example, compared to the Pre-regulation Simulation, SIN concentrations were predicted to increase at some locations under the Proposed Consented Scenario (with these assumptions). In the calibrated water quality model, some of this other existing IFLU land is assumed to have nitrogen leaching rates that are less than the CNLM specified in the recalibrated Table 14.2, and some are assumed to have rates that exceed the CNLM within the recalibrated Table 14.2. Where IFLU have N leaching rates that are less than that specified by recalibrated Table 14.2, the modelling assumes that leaching rates would increase up to the maximum allowed by Table 14.2 including in some non-target catchments upstream of target catchments. On that basis, the model predicts SIN concentrations increase downstream of these locations under several of the PC2 scenarios. However, it is not certain that this 'leaching up' to Table 14.2 will materialise to the extent predicted, due to the recent restrictions on dairy farming and dairy support intensification introduced by the NESFM Regulations. The modelling could be said to be conservative in that regard. I note there is also a 'strict' scenario which assumes no increase in leaching rates and this indicates greater N load reduction.
6. The actual future outcome may lie somewhere between the PC2 scenarios and the 'strict' scenario, which suggests modest improvement for the target catchments. I have recommended amendments to PC2 which introduce limits based on the modelling Associate Professor Horne undertook for the scenario water quality modelling regarding achievable N leaching reductions on various IFLU. These proposed amendments will, in my opinion, reduce much of the uncertainty in PC2 about how much N leaching is likely to result.
7. It is important to emphasise that the PC2 provisions are predicted to contribute to only a modest water quality improvement. The refinements I propose to the policies and rules will make that outcome more certain, but it will still be modest. That is in the context where, even if there was strict adherence to the Table 14.2 CNLMs, it is predicted that the target WMSZ would still exceed the One Plan Schedule E water quality targets. However, the water quality trend data suggests an improving trend in some target catchments and all N reduction will enhance that, however marginally.
8. It must also be remembered that, the water quality impact, while an important consideration for PC2, is not the only relevant consideration in the section 32 evaluation. It is also relevant and important to consider the economic and social costs and enforceability of the proposed and alternative options. The section 42A reports (and the supporting technical reports) of Dr Collins, Mr McNally and Mr Clough illustrate that there are economic and social costs associated with strict compliance with Table 14.2 scenario. In this respect, I am satisfied that the inclusion of a consenting pathway

in PC2 is the most appropriate way to achieve the One Plan objectives and the purpose of the RMA, taking into account all relevant s 32(2)(a) considerations. This is particularly the case given the very small margins of change between the different water quality scenarios as reported by Dr Snelder and the Scenario Modelling Report.

9. The modelling undertaken to support the One Plan appeals process anticipated that implementation of the One Plan would result in water quality improvements in some WMSZ and continued degradation in others. The Land, Water, People modelling confirms that the same holds true for PC2 (and this is agreed by the Water Quality experts³⁴). The Scenario Modelling Report³⁵ concludes that, under some of the PC2 scenarios, there are increases in SIN concentrations at some individual assessment points. The report explains that these increases occur because the calibrated model defined some areas of IFLU as having N export coefficients that are less than the N leaching rates in recalibrated Table 14.2. The N load model assumes that these leaching rates are able to increase up to the Table 14.2 CNLMs. The areas where this is likely are shown in blue on Figure 2 of the Scenario Modelling Report (and include some target catchments).
10. The Scenario Modelling Report concludes that PC2 will lead to modest water quality improvements in the target catchments but that increased N leaching up to Table 14.2 limits will increase SIN concentrations in some locations. However, that outcome relies on those IFLU activities actually being able to 'leach up' and there is some doubt about whether that will be possible under the recent NESFM Regulations (as discussed in the section 42A reports of Dr Snelder and Abby Matthews). In this respect, the modelling of PC2 scenarios is conservative and the actual outcome may be closer to that represented by the 'proposed consented strict' scenario which assumes that no 'leaching up' occurs. Results for the 'proposed consented strict' scenario are more optimistic than for other PC2 scenarios³⁶.
11. Overall, for the purposes of comparing the impact for section 32 evaluation purposes, I conclude that the available options (operative One Plan with strict compliance, PC2 or my proposed refined PC2) have very similar water quality outcomes at the WMSZ scale, which is the relevant scale for the purposes of RPS Policy 5-4 (enhance water quality where degraded in order to meet the water quality for the water management zone).

³⁴ 13 August 2020 Joint Witness Statement of Water Quality Experts: answer to Question 6 (page 9)

³⁵ The Land, Water, People report *Scenario Modelling of Nitrogen Management in Manawatū-Whanganui Region (Supporting Plan Change 2)* September 2020: page 68 and Figure 2

³⁶ Demonstrated in Table 3 of the Land, Water People (September 2020) report: mean relative difference (i.e. exceedance of Schedule E SIN target value) is 40% for 'proposed consented' (PC2); 42% for 'proposed year-20 pathway GMP' (i.e. my proposed amended PC2 provisions); 41% for 'proposed year-20 pathway BMP' (involving the upper end of N reductions achievable using BMP); and 35% for 'proposed consented strict' (no 'leaching up').

9.3 Discussion: Issue (b) BPO and GMP Alone are Insufficient to Address Water Quality Degradation

12. On their own, I agree that BPO and GMP are not the complete answer to reversing water quality degradation and achieving water quality improvement. But the One Plan and PC2 does not expect them to be. Addressing the diffuse N leaching from IFLU activities is one element of a wider strategy – a step along the journey in time. The Scenario Modelling Report demonstrates that there have been SIN reductions in the WMSZ where IFLU activities have been required to implement N reduction mitigations. This is illustrated in the comparison of the ‘pre-regulation’ and ‘operative year-20’ scenarios summarised in Table 3 of the report.
13. The Water Quality experts all agree that, all things being equal, SIN should be improved in the catchment as a result of consenting to date.³⁷ They also agree that the Land, Water, People modelling demonstrates where water quality has improved. I note the reservation of the Water Quality experts³⁸ that it is unclear whether the observed SIN concentrations are directly attributable to consenting and may be confounded by other factors. However, as Dr Snelder notes in his section 42A technical report,³⁹ SIN improvements are detected at both the 10 and 20-year time scales and a large proportion of sites in the target catchments have improving trends for the 20-year period. This is consistent with model predictions concerning the impact of N leaching reductions on 213 dairy farms that have been consented post-2012 (“**Consented Farms**”). This therefore provides some limited evidence that management actions are contributing to the observed decrease in in-river nitrogen concentrations.
14. I agree that, as publicly notified, the scope of GMPs to be adopted through the discretionary activity consenting pathway were not defined with sufficient detail. I understand that the intention was to provide flexibility to farmers and growers about the management practices they might adopt to manage N leaching as part of their activities. At the other end of the spectrum, however, plan users are looking for more certainty. I consider that the policies, rules and defined terms would benefit from some ‘tightening’ of requirements to minimise uncertainty. The uncertainty is problematic both for IFLU applicants (they do not know exactly what lengths they will be required to go to) and for the water quality outcome (without clear parameters, the impact for N load cannot be estimated). The pros and cons of having a clearer understanding of GMP (and for that matter BMP) were discussed by the Farm Management experts with a general consensus that more guidance through identification and listing of practices (in the form of a tool box) would be helpful. I propose amendments to the PC2 provisions in later chapters of this report to address these matters.

³⁷ 13 August 2020 Joint Witness Statement of Water Quality Experts: answer to Question 3 (page 6).

³⁸ 13 August 2020 Joint Witness Statement of Water Quality Experts: answer to Question 3 (page 6).

³⁹ Summarised in paragraph 1 (c).

9.4 Discussion: Issue (c) Providing a Consenting Pathway for IFLU Activities That Exceed Table 14.2 Will Enable Increased Water Quality Degradation

15. This proposition is not supported by the N load modelling. The Scenario Modelling Report concludes that 'the discretionary pathway options for unconsented farms (Proposed Year-20 Pathway) improves WQ relative to taking no action on unconsented farms'.⁴⁰ Implementation of PC2 will require existing IFLU activities that are currently exceeding the Table 14.2 limits to reduce their N leaching. PC2 will not facilitate increased leaching by IFLU activities that currently are leaching below the CNLM in Table 14.2, by any greater degree than the operative provisions. PC2 will not halt all N leaching and may not improve water quality as quickly as strict adherence to the Table 14.2 limits would, or as radically as some observers may like. However, PC2 will enable Horizons to drive land use management improvement to achieve N leaching reductions that contribute to water quality improvement at the WMSZ. This is the scale of interest in Policy 5.4.
16. It is also relevant to note that PC2 includes amendments to Policy 14-6 (e) and (f) that enable decision makers to impose requirements to address other nutrient leaching and run-off, faecal contamination and sediment losses. These requirements are in addition to N leaching. To the extent that these requirements will reduce future contaminant loads, they must also contribute to water quality improvement.

9.5 Discussion: Issue (d) It is Unclear What Impact PC2 Will Have on N Loads in Freshwater, Groundwater, Wetlands, Estuarine and Coastal Marine Environments

17. Abby Matthews acknowledges in her section 42A technical report the degraded state of the region's wetlands and estuaries and the impact of surface water and groundwater on coastal water quality. In commenting on⁴¹ potential outcomes for water quality in lakes, groundwater, wetlands, estuarine and coastal marine environments, Ms Matthews observes that a reduction in in-river nitrogen load from PC2 will also contribute to a reduction in N in downstream receiving environments, including estuaries and coastal environments. Reducing N leaching on farm is also anticipated to have a positive effect on groundwater, and groundwater-fed lakes and wetlands, streams and rivers, as well as estuaries and the coast.
18. Ms Matthews also comments on the 'leaching up to the table issue' discussed elsewhere in my section 42A report. Ms Matthews clarifies that the LUC approach in the One Plan, as originally notified, always provided for potential land conversion and intensification. In some areas of the region, it was also recognised that it was

⁴⁰ Point 4, page 46.

⁴¹ Paragraph 69.

theoretically possible that some farmers could seek a resource consent to increase their N leaching to meet the Table 14.2 CNLM. However, Ms Matthews notes that there are some constraints on such development in the Horizons Region; for example, water availability in some catchments (such as the Upper Manawatū, Coastal Rangitikei, Coastal Lakes and Horowhenua catchments) presents challenges to securing water permits for irrigation. Further restrictions on agricultural conversions and dairy farm intensification have also been introduced by the NESFM regulations.

19. Ms Matthews considers that, with those additional constraints not factored into the model assumptions, the outputs for all operative and PC2 scenarios could be considered conservative. The potential for increased N leaching in some locations does not alter Ms Matthews' primary conclusion that reducing N leaching inputs to groundwater and surface water, as PC2 proposes, will contribute to improving water quality in wetlands, estuaries and the coast.

9.6 Discussion: Issue (e) E2M Modelling is a Superior Alternative Not Considered by Horizons

20. The alternative approach of 'farm optimisation' using the 'Environmental-Economic Model' ("E2M") is discussed in the submission by Forest and Bird (S59 – from paragraph 38, page 7). There are two aspects to the discussion: (1) whether E2M is an option that should be considered for establishing the N leaching limits in the One Plan and (2) whether E2M is an option for evaluation of farm systems at individual farm scale for the purposes of applications for consent for IFLU activities. PC2 does not propose any change to the fundamental way in which the N leaching limits are determined for each LUC class. Table 14.2 has simply been recalibrated through a more recent OVERSEER® version. In this respect, it is my view that the suggestion that the current method should be replaced by a method based on E2M is beyond the scope of PC2.
21. PC2 does not prevent use of E2M modelling by individual farms to support an application under the PC2 framework. In fact, PC2 contemplates this because the proposed amendments to the definition of 'nutrient management plan' delete reference to OVERSEER® and recognise any nutrient management model.

9.7 Discussion: Issue (f) PC2 Fails to Give Effect to the RMA, NPSFM, NZCPS and RPS, is Inconsistent with Te Mana o te Wai and will not Maintain and Enhance Water Quality

22. The Section 32 Report supporting PC2 concluded that the PC2 provisions are the most appropriate way to achieve the purpose of the RMA because (in summary) they provide for a workable framework to regulate diffuse N leaching from existing IFLU activities and would enable Horizons to get on with controlling existing IFLU activities to reduce the cumulative total of one source of N.

23. The section 5 purpose of the RMA requires use and development in a way or at a rate which enables human and economic activity while:
- (a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations;
 - (b) safeguarding the life-supporting capacity of water, soil and ecosystems; and
 - (c) avoiding, remedying, or mitigating any adverse effects on the environment.
24. The One Plan does not rely exclusively on the Chapter 14 provisions for existing IFLU activities to give effect to the RMA purpose. The Chapter 14 provisions are just one component of the One Plan's strategies for addressing the acknowledged degraded state of water quality in the region. The Chapter 14 provisions regulating existing IFLU activities are, in turn, a sub-part of those strategies and cannot be expected to, single-handedly, give effect to the RMA's purpose.
25. In my view, a relevant question is whether PC2 prevents Horizons:
- (a) achieving integrated management of natural and physical resources (the purpose of regional policy statements – RMA section 59); or
 - (b) carrying out its functions to achieve the RMA purpose (the purpose of regional plans – RMA section 63); or
 - (c) giving effect to the NPSFM, NZCPS or RPS (RMA section 67 (3) requirement to give effect to higher order instruments); or
 - (d) would result in the regional plan being inconsistent with any water conservation order or other regional plan chapter of the One Plan (RMA section 67 (4)).
26. I consider these questions below.

RMA Purpose

27. The purpose of the RMA contemplates enabling human and economic activity and Horizons is not free to disregard those values in changing the One Plan provisions. The purpose of the RMA is not only about water quality. PC2 seeks to resolve a conflict within the operative Chapter 14 provisions that is currently preventing Horizons from regulating and enabling economic activity (existing IFLU activity) to continue. The proposed exception proposed in Policy 14-5 (d) and in Policy 14-6 (d), (e) and (f) will enable the continuation of existing land use in appropriate cases and will require N

leaching reductions from existing IFLU activities that contribute to water quality improvement, while reserving a discretion to refuse consent where necessary.

28. The Scenario Modelling Report confirms that implementation of the operative One Plan to date (including authorising N leaching in excess of the Table 14.2 limits) has been associated with substantive reduction in SIN in the targeted WMSZ.⁴²
29. The Land, Water, People report also predicts that, generally, PC2 is anticipated to modestly reduce SIN concentrations compared to the 'pre-regulation' scenario. That seems logical: reducing the N leaching loss from the remaining existing IFLU activities through regulation must contribute to reducing in-river SIN. Dr Snelder and Ms Matthews acknowledge the potential for increased N leaching by some IFLU activities (including in non-target catchments) to result in increased SIN in downstream target catchments. However, at the WMSZ scale, the N load modelling outputs suggest modest improvement. In my opinion this must also contribute to sustaining the potential of natural (water) resources to meeting the needs of future generations and safeguarding the life-supporting capacity of water and ecosystems as required by section 5 of the RMA. In this respect, it cannot be said that PC2 fails to give effect to the purpose of the RMA. Whether PC2 is the most appropriate way of achieving the RMA purpose, relative to other reasonably practicable alternatives, is a separate consideration under section 32 of the RMA. In this respect I note again that the differences between the available options are slight in terms of water quality and there are other matters (enabling people and communities) to consider.

NPSFM

30. By the time of the PC2 Hearing, the NPSFM 2020 will have come into effect. Horizons must give effect (implement) the NPSFM as soon as reasonably practicable. Equally, however, the new 'freshwater planning process' in section 80A of the RMA required Horizons to publicly notify the freshwater planning instrument that is intended to give effect to the NPSFM 2020 no later than 31 December 2024. As explained in Dr Peet's section 42A report, Horizons has commenced the process intended to review the One Plan which will result in the freshwater planning instrument(s) that will give effect to the NPSFM 2020. PC2 was not promulgated as a plan change to give effect to the NPSFM 2020 (or even the NPSFM 2017). PC2's purpose is highly confined and does not address the NPSFM. I have discussed these matters in Chapter 4 of this section 42A Report, including my view that PC2 is not inconsistent with the objective of the NPSFM.
31. I note that Appendix 5 of the NPSFM 2020 identifies the Lake Horowhenua (Hoki_1a) and Hokio (Hoki_1b) water management sub-zones as 'specified vegetable growing areas'. These are both targeted water management zones subject to PC2. Part 3.33 of

⁴² Section 4.2.3 and Figure 7 on page 29 of the report *Scenario Modelling of Nitrogen Management in Manawātū-Whanganui Region (August 2020)*.

the NPSFM 2020 requires that, when implementing any part of the NPSFM 2020, Horizons must have regard to the importance of the contribution of the specified growing area to the domestic supply of fresh vegetables and to maintaining food security for New Zealanders. While PC2 is not implementing any part of the NPSFM, I have considered the intent of this policy when responding to submissions which sought greater policy support of the role CVG played with domestic food supply.

NZCPS

32. I have considered the NZCPS in Chapter 4. If PC2 results in overall reduced in-river SIN, it follows that it will contribute to improving water quality and natural character in the coastal environment, consistent with the relevant objectives and policies of the NZCPS.
33. I address in the next section of this report the question of whether PC2 fulfils the requirements of the RMA relating to tangata whenua values and cultural well-being.

RPS

34. The section 42A reports of Dr Snelder and Ms Matthews, and the technical reports on water quality state, trend and N load modelling, support a conclusion that at the WMSZ scale, PC2 will assist by managing land use to enhance degraded water quality. Policy 5-4 does not require that all proposals must themselves demonstrate that they will achieve the Schedule E targets. PC2 is, in my opinion, consistent with Policy 5-2 and will contribute positively to achieving the enhancement sought by Objective 5-2. RPS objectives and policies do not suggest to me that a plan change should be refused on the basis that it would achieve improvement in some, but not all, water management zones or because it would achieve only a small improvement.
35. I accept that PC2 as notified only indirectly addresses Objective 2-1 in relation to mauri and kaitiakitanga. I propose amendments to bring those considerations into play, through the references in Policy 14-6 to the Schedule B values and relevant treaty settlement documents.⁴³
36. PC2 is entirely consistent with Objective 4-2 and the related land management policies (4-2 and 4-3). Amended as I propose, PC2 will regulate IFLU activities and result in on-farm land management improvement and material reductions in N leaching loss.

⁴³ This was agreed at the 20.08.20 RMA Planning expert conferencing session to be the appropriate approach (in the answer to Question 11 (page 14)).

9.8 Discussion: Issue (g) One Plan Schedule B Value of ‘Mauri’

37. Schedule B of the One Plan details the values identified for the region’s water management sub-zones. The value ‘Mauri’ is identified region-wide, in all water management sub-zones, and Part B.3 of Schedule B states the management objective for this value as: ‘the mauri* of the water body^ and its bed^ is maintained or enhanced’. The objective does not state the time frame over which it is to be achieved. To the extent that PC2 is predicted to result in modest reductions in in-river SIN, it is my opinion that this must be beneficial in at least maintaining mauri.

9.9 Discussion: Issue (h) Adding Water Management Sub-Zones to Table 14.1

38. Submitters have identified other degraded catchments that they consider need to be brought into the Chapter 14 framework for regulating existing IFLU activities. Particular mention is made of the lower and coastal Manawatū catchment, lower Tokomaru, lower Mangaore, Oroua tributaries, lower Rangitikei (including the Porewa and Tutaenui tributaries, lower Whangaeahu, Makotuku and Turakina catchment.
39. As already noted, PC2 has a tightly confined purpose pertaining only to the currently-listed targeted WMSZ. PC2 does not propose any change to the listed WMSZ and my view is that requests to expand the list (expand the applicability of the Chapter 14 framework for existing IFLU activities) are beyond the scope of PC2. The submissions acknowledge that more in-depth analysis is required to assess the risk to these sub-zones of degradation from diffuse discharges from IFLU activities. I am also concerned that adding water management sub-zones, and the restrictions on existing activities associated with related regulation, would prejudice persons who did not anticipate from the publicly notified PC2 information that their existing activities in non-targeted water management sub-zones would become restricted. My view is that review of the Table 14.1 list of targeted WMSZ can be more comprehensively and transparently undertaken as part of Horizons’ Freshwater Futures catchment reviews.

9.10 Discussion: Issue (i) Monitoring the Efficacy of PC2

40. My expectation is that Horizons’ process for reviewing the One Plan, through the Freshwater Futures programme described by Dr Peet, will include an evaluation of the efficiency and effectiveness of the then operative provisions. That is a normal plan-making approach and a requirement of section 35 of the RMS. The issues that PC2 is seeking to address were identified through a s 35 evaluation, as well as through focused reviews of One Plan provisions by many parties (including in some cases, the courts).

9.11 Discussion: Issue (j) Limited Time Periods to Ensure Water Quality Improvement

41. I agree that PC2 would be improved by specifying time limits to:
- (a) incentivise currently unconsented IFLU activities to make applications promptly,
 - (b) to ensure N leaching reductions occur as soon as practicable, and
 - (c) to ensure that N leaching in excess of the Table 14.2 CNLM does not endure for a long period and is able to be re-considered in terms of the relevant future provisions that will be developed through the One Plan NPSFM review.
42. On the first point, I note that the RMA Planning experts agreed that ‘promptly’ should be within two years. On the second point, I note that the Farm Systems experts agreed in their joint witness statement of 20 and 21 July 2020⁴⁴ that GMPs are capable of being implemented within five years. I’ve already noted that for CVG, Dr Jolly expects most GMPs and some BMPs can be implemented within three years.
43. Implicit in Table 14.2 is a requirement that the CNLM limit must be achieved by set dates. The alternative limits proposed by Dairy NZ and Federated Farmers NZ would at their request apply immediately. A compliance time period would need to be specified in consent conditions (or could be specified in the rule itself).
44. In the interests of clarity, and certainty for IFLU activities, my preference is to specify it within the rule framework. The detail of my suggestions around time frames are included in Chapters 20 and 21 of this report when I discuss specific policies and rules.

9.12 Discussion: Issue (k) PC2 Will Not Address Other Nutrients and Contaminants

45. PC2 does address the leaching and run-off of other nutrients, as well as faecal contamination and sediment. Policy 14-6 enables a decision maker to impose requirements relating to these matters in consent conditions and through NMP. This amendment under PC2 broadens the scope of contaminants addressed by the Chapter 14 provisions for existing and new IFLU activities.

⁴⁴ At page 14.

9.13 Discussion: Issue (l) PC2 Will Conflict with the Our Freshwater Futures Plan Changes

46. PC2's purpose is tightly confined to addressing a specific problem and, as such, Horizons' intention is that PC2 is an interim initiative until the comprehensive Freshwater Futures work can be completed. Any plan change(s) that result from Freshwater Futures may well change the settings for IFLU activities. That is a quite usual occurrence in policy development: future policy settings supersede historical settings and often for good reason. That is not so much a conflict as a process of evolution. Importantly also, in that process, the future One Plan policy settings cannot be bound by the PC2 provisions. As I have already described, fresh examination will be required.

9.14 Discussion: Issue (m) Policy 14-9

47. I do not read Policy 14-9 as being at all relevant to PC2 or policy development. It is a policy explicitly only applicable to applications for resource consent.

9.15 Discussion: Issue (n) Failure to Quantify the Number of Unconsented IFLU Activities

48. Horizons has quantified the number of consented IFLU activities (its consent data base allows this) and unconsented existing IFLU activities. The number of unconsented dairy farms was agreed, for the purpose of N load modelling, between the water quality experts as 167. That number is the most reliable available to Horizons and has been arrived at after analysis of land use maps, Horizons' consent data base and discussion with dairy sector representatives. Similarly, for the other types of IFLU (horticulture, arable cropping and irrigated sheep and beef), Horizons has conferred with the relevant sector representatives (Horticulture NZ and its advisors, the Foundation for Arable Research and Beef and Lamb NZ) to verify its assumptions based on land use mapping.
49. I am comfortable that the information underlying PC2 and informing the N load modelling by Land, Water, People is the best available to Horizons at this time.

9.16 Recommendations

50. For the reasons explained in the foregoing paragraphs, I recommend that:
- (a) The following submission points and the aspects of the following submissions that seek that oppose PC2 because it is not a sufficiently stringent policy framework or that its environmental outcomes are uncertain be **accepted in part** to the extent that PC2 is confirmed in modified form:

- i. Submission points 59.1 (Forest and Bird), 61.15 and 61.16 (Director General of Conservation) and the further submission points of Forest and Bird (FS1.61.15 and FS1.61.16), the Water Protection Society (FS2.59.1, FS2.61.15 and FS2.61.16), Director General of Conservation (FS3.59.1), EDS (FS5.59.1), Dairy NZ (FS9.59.1), Federated Farmers NZ (FS11.59.1, FS11.61.16), Potatoes NZ (FS12.59.1) and Potatoes NZ (FS12.59.1);
- ii. The submissions of Kahungunu ki Tāmaki nui a Rua (S4), EDS (S54), Fish and Game (S55), Director General of Conservation (S61), Muaūpoko Tribal Authority Inc. (S62), Ngā Waihua o Paerangi Trust (S63), Water Protection Society (S65), Ngāti Turanga (S67), Te Roopū o Ngāti Whakatere Trust (S68), Ngāti Raukawa (S70), Hokio A Māori Land Trust (S76) and Tamarangi Hapū o Muaūpoko (S84); and
- iii. The further submission points in support of and opposed to the submissions and submission points listed in (i) and (ii) above.

10 Opposition Based on Effects on Tangata Whenua Values

10.1 Introduction

1. The submissions lodged on behalf of hapū and iwi raise four primary concerns:
 - (a) That Horizons' pre-notification consultation did not meet the requirements of Schedule 1 of the RMA and/or that the consultation was inadequate because insufficient time was given for meaningful engagement, and that the consultation process did not give effect to the principles of the Treaty of Waitangi (te Tiriti o Waitangi) that should underpin the relationship between Horizons and the tangata whenua of the Region;
 - (b) That the s 32 evaluation report fails to properly identify and consider significant values held by tangata whenua in relation to land and water, and that the PC2 provisions fail to recognise and provide for the relationship of Māori people of the Region and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga. This includes concerns about the impact of PC2 on the mauri of water;
 - (c) That the documentation supporting PC2 does not include a cultural values assessment, examining the impact of PC2 on cultural values, including values associated with coastal lakes, and that the s 32 evaluation is incomplete or deficient in this respect; and
 - (d) That PC2 fails to consider and recognise Te Mana o Te Wai as required to by the NPS-FM 2017. (I note that this will be superseded by the 2020 NPS-FM by the time this Section 42A Report is lodged).
2. All but one of the submissions on behalf of hapū and iwi request that PC2 be declined or withdrawn to allow Horizons to start again and engage with them in a way that they consider meets the requirements of the relevant legislation, and to allow Horizons to undertake a cultural impact assessment. Most of these submitters also consider that PC2 fails to meet Horizons' section 30(1)(c) obligation to maintain and enhance the quality of water in water bodies and coastal water, and also fails to give effect to the relevant objectives and policies of the RPS and the NZCPS.
3. I am aware, from discussions at pre-hearing meetings, that these submitters do not agree that the benefits of workable regulation of existing IFLU activities under PC2 are sufficient reason to press on with PC2. They consider the better course is to start again and 'get it right' in terms of engagement with hapū and iwi before progressing any further plan change on this topic.

4. Submission S71 (by Joanne Heperi, on behalf of Rangitāne o Tāmaki nui-a-rua) supports PC2 in principle, however raises questions about how Mātauranga Māori and cultural values or methodologies will be integrated into decision making under PC2.
5. Submission S63 (by Ngā Waihua o Paerangi Trust on behalf of Ngāti Rangi) considers that the Ngāti Rangi claims Deed of Settlement (signed 10 March 2018) should have been considered in preparing PC2 and was not. The Trust does not consider that PC2 recognises and provides for Te Mana Tupua and Ngā Toka Tupua o Te Waiū o Te Ika as required by the August 2019 claims Settlement Act (because of the potential for PC2 to increase degradation of water). Submission S81 (Jill Sheehy) refers to Te Awa Tupua (Whanganui River Claims Settlement Act 2017) but does not specify what issues PC2 raises in terms of that Act. No other submissions raised issues about PC2 in terms of Treaty Settlement Act requirements.
6. Submissions S4, S62, S63, S67, S68, S69 and S70 raise concerns about the impact of PC2 on water quality. Those submission points are discussed in Chapter 9 of this report.
7. Some of the issues addressed in this chapter are interrelated with matters addressed in other chapters, including Chapter 4 (Statutory Framework, which addresses statutory and non-statutory documents of relevance to the consideration of issues of importance to tangata whenua). I have also read the Section 42A report of Dr Nic Peet for Horizons regarding consultation Horizons undertook with hapū and iwi.

10.2 Adequacy of Pre-Notification Consultation

8. The specific submission points that raised concerns about the process of pre-notification consultation are summarised in the following table:

Submitter	Sub No.	Summary of Issues Raised	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
Muaūpoko Tribal Authority Inc.	62 (pg.1)	Requests removal of the Lake Horowhenua catchment from PC2. Proposed PC2 has not been tested against sections 6(e), 7(a), and 8 of the RMA 1991 with Muaūpoko and consultation with Muaūpoko has not occurred. Requests active engagement by Horizons to develop more holistic	Horowhenua District Council (FS31.62.1) Director General of Conservation (FS3.62.1.1)	Director General of Conservation (FS3.62.1.2) Federated Farmers of New Zealand (FS11.62.1)

		solutions to the pollution of Lake Horowhenua.		
Ngā Waihua o Paerangi Trust	63.33 Page 6	Requests that PC2 be withdrawn to allow an opportunity for proper consultation with Ngā Waihua o Paerangi Trust. PC2 process did not allow for meaningful engagement. Deed of settlement should have been considered as part of the development of PC2. Requests PC2 be withdrawn to allow the establishment of Ngā Wai Tōta and associated strategy document (Te Tāhoratanga).	Forest and Bird (FS1.63.33) Water Protection Society (FS2.63.33) Director General of Conservation (FS3.63.33.1, FS3.63.33.2, FS3.63.33.3, FS3.63.33.4)	
Ngāti Turanga	67 (page 1 and para. 17)	Requests that PC2 be refused in its entirety. PC2 did not adopt a collaborative planning process. Horizons has failed to meet its statutory obligations (Schedule 1, Clauses 3, 3B, 4A) to consult with Ngāti	Director General of Conservation (FS3.67.1.1, FS3.67.1.2, FS3.67.1.3, FS3.67.1.4) Water Protection Society (FS2.67.1) Forest & Bird (FS1.67.1) Horowhenua DC (FS30.67.1)	
Te Roopū Taiao o Ngāti Whakatere Trust	68 (page 1 and para. 13)	Raukawa and their hapū as Tangata Whenua of the Horowhenua rohe and Te Runanga o Raukawa as an iwi authority.	Director General of Conservation (FS3.68.1.1, FS3.68.1.2, FS3.68.1.3, FS3.68.1.4) Water Protection Society (FS2.68.1) Forest & Bird (FS1.68.1) Horowhenua DC (FS30.68.1)	
Te Rūnanga o Raukawa	70 (page 1 and para. 22)		Director General of Conservation (FS3.70.1.1, FS3.70.1.2, FS3.70.1.3, FS3.70.1.4) Water Protection Society (FS2.70.1) Forest & Bird (FS1.70.1) Horowhenua DC (FS30.70.1)	
Hokio A Māori Land Trust	76.1	Decline PC2 for reasons including the proposed plan change breaches the Treaty of Waitangi, the RMA 1991 in particular, but	Forest and Bird (FS1.76.1) Director General of Conservation (FS3.76.1) Horowhenua District Council (FS17.76.1)	Federated Farmers of New Zealand (FS11.76.1)

		not limited to Section 3(1)(d) of the First Schedule.		
Jill Sheehy	81	Opposes PC2. Requests an extended submissions period to enable Horizons to directly engage with the iwi authorities and to commission cultural values and cultural impact assessments.		Federated Farmers of New Zealand (FS11.81.1, FS11.81.2)
Tamarangi Hapū of Muaūpoko	84.1	Submitter seeks the relief sought in submission S76: Decline PC2 for reasons including the proposed plan change breaches the Treaty of Waitangi, the RMA 1991 in particular, but not limited to Section 3(1)(d) of the First Schedule.	Director General of Conservation (FS3.84.1) Horowhenua District Council (22.84.1)	Federated Farmers of New Zealand (FS11.84.1)

10.3 Discussion: Pre-Notification Consultation

9. Schedule 1 of the RMA requires local authorities to engage with the tangata whenua of their area, through iwi authorities, during the process of preparing policy statements and plans. Clauses 3, 3B and 4A of Schedule 1 require that:

- Clause 3 (1) During the preparation of a plan change, the local authority shall consult with (d) the tangata whenua of the area who may be affected, through iwi authorities.
- Clause 3B For the purposes of Clause 3 (1) (d), a local authority is to be treated as having consulted with iwi authorities if it:
- (a) Considers ways in which it may foster the development of their capacity to respond to an invitation to consult; and
 - (b) Establishes and maintains processes to provide opportunities for those iwi authorities to consult it; and
 - (c) Consults with those iwi authorities; and
 - (d) Enables those iwi authorities to identify resource management issues of concern to them; and
 - (e) Indicates how those issues have been or are to be addressed.

Clause 4A (1): Before notifying a plan change, a local authority must:

- (a) Provide a copy of the relevant draft proposed plan change to the iwi authorities consulted under 3 (1) (d); and
- (b) Have particular regard to any advice received from those iwi authorities.

Clause 4A (2): When a local authority provides a copy of the relevant draft proposed plan change, it must allow adequate time and opportunity for the iwi authorities to consider the draft and provide advice on it

10. It is the Clause 4A requirement that I understand is of particular concern to some of the iwi submitters. As I understand the issue, the concern is not about *whether* Horizons provided a copy of the draft PC2 provisions (Horizons did so by letter dated 18 June 2019), rather, the concern is that inadequate time was provided for feedback.
11. Dr Peet's s 42A report describes the engagement process Horizons undertook for PC2. Appendix C to the s 32 report provides a summary of consultation undertaken with iwi authorities during the PC2 development phase. Dr Peet also provides in his Appendix A a more detailed chronology of the engagement process. Dr Peet also explains the change in approach of Horizons after December 2018, when PC2 shifted from recalibration of Table 14.2, to also include changes to the policy framework to more clearly provide a consent pathway for IFLU activities that exceeded Table 14.2. Dr Peet explains the reasons for the change in approach, and that it was signalled to, and discussed with, iwi representatives around that time.
12. I expect some iwi submitters will invite the Panel to form a view on the adequacy of the time allowed and the opportunity for comment on draft PC2 (the Clause 4A requirement). It is not for me to offer any recommendation on that procedural matter. The Panel will come to its own view on this issue. To assist, I highlight below the relevant factual matters.
13. Horizons wrote to all iwi on 18 June 2019 (**Attachment F1**), attaching the then draft PC2 provisions (**Attachment F2**) and inviting feedback by 11 July 2019. The letter was open about the fact that Horizons was under a tight timeframe and offered to discuss the proposals if iwi wished. The period between 18 June and 11 July allowed the iwi authorities 17 working days to respond with feedback. I understand that no substantive feedback or complaint about the timeframe was received from any iwi authority by 11 July 2019, or by 16 July 2019 when a follow-up email was sent. The chronology attached to Dr Peet's s 42A report does not record any complaints about time frame or requests for extra time. The 16 July 2019 follow up email (**Attachment F3**) stated that Horizons '*remains open to discussing the changes in person, or however you choose*' while advising that PC2 would be publicly notified on 22 July 2019.

14. The chronology and Appendix C demonstrate that Horizons implemented a deliberate and genuine process of engagement with all potentially affected iwi about the issues that had been identified in the IFLU provisions, as early as March 2018. The engagement was explicitly about the subject matter of PC2, alongside other matters of current interest. A range of engagement mechanisms were proposed by Horizons (emails, individual meetings, hui, workshops with other stakeholders) and Horizons used established (and working) lines of communication to the representatives nominated by the iwi authorities themselves.
15. This is not a case of a local authority 'cold calling' on an issue. Horizons had already-established person-to-person connections with the relevant personnel within the iwi authorities of the Region and used those established lines of communication in engaging on PC2. My observation is that Horizons' attempts to engage with tangata whenua, through the iwi authorities, was genuine and candid and occurred over a long period. It cannot be said to have been cursory. Section 25 of the Section 32 Report summarises the consultation undertaken with iwi and the feedback received from iwi during the engagement process. Section 25 does not record any feedback from iwi on the draft provisions. The chronology attached to Dr Peet's evidence confirms that none was received.

16. I comment on the RMA Schedule 1 requirements as follows:

Clause 3 (1): During the preparation of a plan change, the local authority shall consult with (d) the tangata whenua of the area who may be affected, through iwi authorities;

The chronology demonstrates that Horizons consulted with all iwi authorities over a period of over a year

Clause 3B: for the purposes of Clause 3 (1) (d), a local authority is to be treated as having consulted with iwi authorities if it:

- (f) Considers ways in which it may foster the development of their capacity to respond to an invitation to consult; and

I understand that Horizons has resourcing arrangements in place with some iwi authorities but I am not familiar with the detail

- (g) Establishes and maintains processes to provide opportunities for those iwi authorities to consult it; and

The chronology demonstrates there were multiple opportunities to respond to Horizons and they all occurred within a wider context of established and regular dialogue on matters generally;

- (h) Consults with those iwi authorities; and

Horizons actively and repeatedly consulted with iwi on PC2 over a long period;

- (i) Enables those iwi authorities to identify resource management issues of concern to them; and

- (j) Indicates how those issues have been or are to be addressed.

Horizons actively invited the iwi authorities to identify issues of concern about the particular PC2 issue;

The s 32 report identifies the issues that had been raised by iwi and addresses these directly, explicitly identifies two bullet point responses to the issues that had been raised by Iwi (page 15 of the s.32 report).

Clause 4A (1): Before notifying a plan change, a local authority must:

- (c) Provide a copy of the relevant draft proposed plan change to the iwi authorities consulted under 3 (1) (d); and
(d) Have particular regard to any advice received from those iwi authorities.

Horizons did this by emailed letter dated 18 June 2019

Clause 4A (2): When a local authority provides a copy of the relevant draft proposed plan change, it must allow adequate time and opportunity for the iwi authorities to consider the draft and provide advice on it

The 18 June 2019 letter provided a period of 17 working days for comment (although a follow-up email indicated this period was actually longer). The chronology indicates that no substantive feedback or advice was received by that date or before public notification.

17. I have commented in other chapters of this report on the submitters' requests to withdraw PC2. For the reasons explained in those other chapters, I do not support withdrawal of PC2. I attended some, but not all of the pre-hearing meetings held with iwi submitters. Horizons staff had hoped that discussion at those meetings would provide further opportunity to explore with iwi representatives in detail their concerns about PC2 and how their concerns might be addressed. As it turned out,, not all submitters were able to attend those meetings and nothing of detail emerged.
18. It is my opinion that declining PC2 would be an extreme response to the concerns raised, particularly given the opportunities there have been for engagement on the issues and would further delay Horizons' ability to regulate IFLU activities.

10.4 Effects on the Relationship of Māori With Culture, Traditions, Ancestral Lands, Water, Sites, Wāhi Tapu and Other Taonga and Effects on Mauri of Water

19. The submitters make the following points on these matters:

Submitter	Sub No.	Summary of Requested Relief	Supported or Opposed (in part or entirely) by:
Muaūpoko Tribal Authority Inc.	62 (pg. 1)	Objects to PC2. At no point in time has the process informing this Plan Change taken into account Muaūpokotanga, effects on Māori land, taonga or potential breaches of the Treaty of Waitangi. PC2 continues to reinforce the poor environmental management of the catchment that has resulted in degradation of taonga. Requests that the Lake Horowhenua catchment be removed from PC2.	Director General of Conservation (FS3.62.1.1)
Ngā Waihua o Paerangi Trust	63.33	PC2 includes policy changes that have impacts beyond a simple technical update. The proposed changes open a consenting pathway for intensive land use activities to exceed Table 14.2 by an unquantified, unknown amount. This carries a high potential to result in an impact on water quality in the Whangaehu Awa. This would breach the One Plan Schedule B value of mauri.	Supported by: Forest & Bird (FS1.63.33) Water Protection Society (to the extent consistent with S65) FS2.63.33 DOC FS3.63.33.1
Ngāti Turanga	67.1 (para. 16, 19, 20, 21)	Requests that PC2 be refused in its entirety. The Regional Council has failed to comply with their statutory duties under the Act to integrate tikanga Māori into PC2, including the implementation of sections 6(e) and 7(a). The Regional Council has also significantly failed to take into account the principles of Te Tiriti o Waitangi. In particular: – principle of active protection – duty to act in good faith – duty to make informed decisions through consultation	Supported by: Forest and Bird (FS1.67.1) Water Protection Society (FS2.67.1) Director General of Conservation (FS3.67.1.2) Horowhenua District Council (30.67.1)
Te Roopū Taiao o Ngāti Whakatere Trust	68.1 (para. 12, 16, 17, 18)	– principle of redress and not creating new grievances – principle of reciprocity – principle of mutual benefit	Supported by: Forest and Bird (FS1.68.1) Water Protection Society (FS2.68.1) Director General of Conservation (FS3.68.1.2) Horowhenua District Council (FS30.68.1)
Te Rūnanga o Raukawa	70.1 (para. 21, 25, 26, 27)		Supported by: Water Protection Society (FS2.70.1) Forest and Bird (FS1.70.1)

			Director General of Conservation (FS3.70.1.2) Horowhenua District Council (FS30.70.1)
Joanne Meri Teresa Heperi (on behalf of Rangitāne of Tamaki Nui a Rua)	71.1	Submitter supports PC2 in principle. However, seeks greater consideration of their cultural values, methodologies and frameworks in decision-making relating to the consenting processes, land uses and monitoring of the waterways. Requests to continue to be notified as an affected party in the consenting process and seeks further engagement with iwi in their rohe about how freshwater quality will be improved.	Supported by: Water Protection Society (FS2.71.1) Horowhenua District Council (FS21.71.1)
Hokio A Māori Land Trust Tamarangi Hapū of Muaūpoko	76.1, 84	Opposes the entire PC2 due to conflict with the Treaty of Waitangi and Part 2 of the RMA, adverse water quality effects and associated serious adverse effects on the health and well being of Muaūpoko.	Supported by: Forest & Bird (FS1.76.1) Director General of Conservation (FS3.76.1, FS3.84.1) Horowhenua DC (FS17.76.1, FS22.84.1) Opposed by: Federated Farmers NZ (FS11.76.1, FS11.84.1)

10.5 Discussion: Effects on the Relationship of Māori With Culture, Traditions, Ancestral Lands, Water, Sites, Wāhi Tapu and Other Taonga and Effects on Mauri

20. To a large degree, these submission points derive from or are integral to the concerns of iwi submitters about the adequacy of consultation and whether Horizons has fully understood the values and issues from the perspective of hapū and iwi. The submissions are critical of the lack of consideration of Mātauranga Māori in the PC2 provisions. They also assert that PC2 fails to take into account the Treaty of Waitangi (te Tiriti o Waitangi). The prehearing meetings that I attended did not help to clarify exactly how PC2 is in conflict with te Tiriti o Waitangi.
21. Issue 2-1 in RPS Chapter 2 of the One Plan identifies water quality as a significant issue for tangata whenua, and particularly:
- (a) Management of water quality throughout the Region does not provide for the special qualities significant to Māori;

- (b) Lakes and streams (for example, Punahau/Waipunahau (Lake Horowhenua) and Hokio Stream) have suffered degradation which continues and are considered culturally unclean;
 - (c) Access to and availability of clean water to exercise cultural activities such as food gathering and baptismal rituals have diminished.
22. Under Issue 2-2 (land use and management), it is noted that:
- (a) Land management plans need to be encouraged to ensure consistent management practices Region-wide;
 - (b) Adverse effects of land use continue to have a detrimental effect on traditional food gathering areas, native habitats and ecosystems.
23. Objective 2-1 has two parts:
- (a) To have regard to the mauri* of natural and physical resources^ to enable hapū* and iwi* to provide for their social, economic and cultural wellbeing.
 - (b) Kaitiakitanga^ must be given particular regard and the relationship of hapū* and iwi* with their ancestral lands^, water^, sites*, wāhi tapu* and other taonga* (including wāhi tupuna*) must be recognised and provided for through resource management processes.
24. Policy 2-3 directs that Horizons must have regard to the mauri of water by:
- (a) implementing Policy 2-1(a) to(i) (which all involve administrative and partnership arrangements separate from PC2);
 - (b) facilitating voluntary rāhui.
25. The guidance on mauri, in Policy 2-3, is not directly relevant to PC2 in my opinion.
26. Policy 2-4 lists issues of significance to hapū and iwi, and these substantively restate Issues 2-1 and 2-2. The text states that the objectives, policies, rules and methods in Chapter 5 and the rules in Chapter 14 will be relevant in addressing these issues. Table 2.1 does not refer to the policies in Chapter 14 as being relevant in addressing the significant issues. However, I do not see that as an obstacle to inclusion of relevant matters in the Chapter 14 policies where necessary to respond to issues raised in submissions on PC2.

27. The RMA Planning experts agreed that the policy considerations for applications to exceed N leaching limits should include the relevant values identified in Schedule B⁴⁵ and in treaty settlement documents in accordance with statutory obligations. I recommend amendments to Policy 14-6 to include reference to those values. I accept that this may not completely address the submitters' concerns. I understand that the intention of the PC2 authors was that the discretionary activity consent pathway, and the policy amendments associated with that, would enable consideration of these matters. It is not all that explicit though the PC2 provisions. My view is that it is possible to better integrate into the PC2 policies consideration of impacts on cultural values and to recognise and provide for the RMA section 6(e) matters in order to assist decision-making on IFLU applications that exceed N leaching limits. If the scope or the wording of my proposed amendments has not fully captured the relevant values, I am happy to explore alternatives. My view is that refinement of the PC2 policy framework is possible and preferable to withdrawal or rejection of PC2 as requested by some iwi submitters.
28. I note the concerns that PC2 proposes a consent pathway that facilitates exceedance of N leaching limits by an unquantified and unknown amount. As explained in Chapter 9, I agree that PC2 does not sufficiently define the scale of exceedance that would be authorised by this pathway. I recommend amendments to PC2 that attempt to define and minimise that exceedance for existing IFLU, but I propose no changes to the framework for new IFLU activities. The limits I recommend do not prohibit N leaching in excess of the Table 14.2 limits, but they would confine them to within a limited range. In this respect, the controlled activity consent pathway that I propose would specify clear limits and require, either leaching rates no greater than the Table 14.2 CNLMs or reductions in the leaching rates of existing IFLU activities (i.e. reductions, not intensification). The discretionary activity consent pathway remains available (as intended by PC2) but with stronger policy guidance for decision making and more explicit consideration of effects and values. It is also relevant to reference the discussion in Chapters 4 and 22 of this Report, about the NES-FM restrictions on dairy conversion, additional dairy irrigation or use of additional land as dairy support and the impact that will have in limiting future intensification of dairy IFLU.

10.6 Request for a Cultural Impact Assessment

29. The submission points on this topic were made by the following submitters:

Submitter	Sub No.	Summary of Requested Relief	Supported or Opposed (in part or entirely) by:
Rangitāne o Manawātū/	85.2	Recommends the Regional Council immediately commission a Cultural Impact Assessment to inform PC2. Without the	Director General of Conservation (FS3.85.2)

⁴⁵ I believe there is an error in the 20 August 2020 RMA Planning JWS answer to Question 12 (top of page 15) reference to values in Schedule 'E': the values for water bodies are described in Schedule 'B' (not 'E').

Tanenuiarangi Manawatū Incorporated (Iwi Authority)		ability to undertake a Cultural Impact Assessment, Rangitāne o Manawatū do not have the opportunity to understand the scope of the proposal and comment on how the Plan Change will impact on the wider iwi ability to provide for their cultural spiritual, social and economic wellbeing.	Federated Farmers of New Zealand (FS11.85.2) Horowhenua District Council (FS.20.85.2)
Ngāti Turanga	67 (para. 25)	PC2 does not contain a level of detail required to evaluate effects on coastal lakes in Rangitikei and Horowhenua (e.g. Lake Horowhenua Lake Papaitonga). The submitters require an assessment of environmental and Māori cultural values to be undertaken and provided to hapū and iwi.	
Te Roopū Taiao o Ngāti Whakare	68 (para. 22)		
Te Rūnanga o Raukawa	70 (para. 31,)		
Jill Sheehy	81	Oppose PC2. Requests an extended submissions period to enable Horizons to directly engage with the iwi authorities and to commission cultural values and cultural impact assessments.	Opposed by: Federated Farmers NZ (FS11.81.1, FS11.81.1.2)

10.7 Discussion: Request for a Cultural Impact Assessment

30. The submissions are critical of the lack of assessment of the PC2 changes on what might broadly be called ‘cultural values’. The Section 32 Report does evaluate ‘cultural benefits’, ‘cultural costs’ and discusses potential implications for ‘mauri’. However it is accurate that those conclusions in the Section 32 Report are not supported by specific assessment of cultural values undertaken by a specialist with expertise in matters of Mātauranga Māori. The Section 32 Report (and supporting consultation) is indicative of a view that because PC2 seeks to facilitate the regulation of IFLU activities, and will thereby reduce N leaching contamination of waterways, it must have a derived beneficial impact for all aspects of the mauri of water in rivers and lakes and the coastal environment. It also places reliance on feedback from iwi about the importance of the broader review (Freshwater Futures) around water quality in the Region.
31. The Scenario Modelling Report and the s 42A reports of Abby Matthews and Dr Snelder confirm that regulation, as proposed by PC2 will result in reduced N load in waterways. However, they caution that the actual contribution to improvement will be marginal at the WMSZ scale and that it is not possible to attribute trends in water quality directly to the reduced N contribution from existing IFLU activities.
32. Although Horizons has a reasonably well-developed monitoring network and monitoring programme for contaminant concentrations and periphyton in rivers, I understand there is limited monitoring of cultural health indices at water management

sub-zone scale. Without that, I am not sure what an evaluation of impacts of the small contribution achievable achieved by regulating the remaining unconsented IFLU activities on cultural values or mauri could determine. According to Abby Matthews and Dr Ton Snelder, we are likely to learn that even if all remaining IFLU activities are strictly regulated, the quality of water in the rivers, lakes and estuaries in the targeted WMSZ will not meet Schedule E water quality targets and will not support the values significant to Māori.

33. It is not clear, from the information available, that an assessment could actually help to determine, at WMSZ scale, what the relative differences are in effects on values between the PC2 regulatory settings and implementation of the operative One Plan (or any other alternative, such as the refinements I am proposing to PC2). It is not clear that it can be done at the scale required for the particular diffuse contaminant PC2 is addressing, and with the information available at this time.
34. I understand that Horizons has commenced a process of catchment reviews to implement NPSFM 2020. Horizons is aware that the statements of values contained in Schedule B of the One Plan need to be refreshed, due to the passage of time since they were first drafted and in order to determine what Te Mana o te Wai means in implementing the NPSFM 2020. I anticipate that the this review of the One Plan will need to be supported by a comprehensive understanding of cultural health indices and assessment of cultural values. That is where the cultural values assessment effort should be directed, in my view: where it will inform choices between substantive options for managing and allocating resources and setting limits, including limits on absorptive capacity of water bodies (potentially). By contrast, PC2 is a plan change with very narrow scope and the choices under consideration do not involve substantively different outcomes. This is demonstrated by the marginal differences between the N load modelling scenarios. I do not consider that the absence of a specialist cultural values assessment at this stage materially impairs the determination of PC2, and I do not consider that its absence is sufficient cause to delay PC2.

10.8 Te Mana o Te Wai

35. Submissions S67 (Ngāti Turanga), S68 (Te Roopū Taiao o Ngāti Whakatere Trust) and S70 (Te Rūnanga o Raukawa) consider that Horizons has failed to provide an evaluation of PC2 on Te Mana o te Wai.
36. By the time the hearing commences, the NPSFM 2020 will have replaced the 2017 NPS-FM. The 2017 Objective AA1 ('to consider and recognise Te Mana o te Wai in the management of freshwater') will have been replaced by Part 1.3 of the 2020 NPS-FM⁴⁶. Part 1.3 describes the concept of Te Mana o te Wai as:

⁴⁶ Which comes into force on 3 September 2020.

- (1) *Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.*
- (2) *Te Mana o te Wai is relevant to all freshwater management and not just to specific aspects of freshwater management referred to in this National Policy Statement.*
37. Part 1.3 then sets out a framework of principles for Te Mana o te Wai. Part 3 of the NPSFM 2020 sets out how the NPSFM is to be implemented. Just as the NPSFM 2017 required regional councils to change regional policy statements and regional plans to consider and recognise Te Mana o te Wai, so too does the 2020 NPS-FM. Part 3.2 of the NPSFM requires regional councils to engage with communities and tangata whenua to determine how Te Mana o te Wai applies to water bodies and freshwater ecosystems in the region. The NPSFM 2017 provided a timeframe for progressive implementation (by 31 December 2025). Horizons has not yet completed the work necessary to implement NPSFM 2020. Until that work is done, my view is that Te Mana o te Wai does not place any particular constraints or requirements on PC2.
38. In my opinion there is nothing inherent in PC2 that conflicts with the concept of Te Mana o te Wai. PC2 is intended to assist Horizons to restore and preserve the balance between the water, the wider environment, and the community, which is, in my view, consistent with the concept described in the NPS-FM.

10.9 Ngāti Rangi Claims Settlement Act

39. The Ngāti Rangi Claims Settlement Act came into force on 1 August 2019 (after the date of public notification of PC2). That perhaps explains why it was not referenced in the Section 32 Report. The Act is relevant for the Panel's decision-making on submissions on PC2. A copy of the Act will be supplied to the Panel electronically, along with the other relevant Claims Settlement Acts.
40. The purpose of the Act is to record the acknowledgements and apology given by the Crown to Ngāti Rangi in the deed of settlement and to give effect to provisions that settle the claims of Ngāti Rangi. Section 107 of the Act defines Te Mana Tupua o Te Waiū-o-Te-Ika and describes Te Waiū-o-Te-Ika as a living and indivisible whole, comprising physical and metaphysical elements, giving life and healing to its surroundings and communities. Section 108 sets out the intrinsic values (Ngā Toka Tupua) that represent the essence of Te Waiū-o-Te-Ika. Section 109 prescribes that persons exercising or performing a function, power, or duty under the RMA in relation to the Whangaehu River or an activity within the Te Waiū-o-Te-Ika catchment that

affects the Whangaehu River must recognise and provide for Te Mana Tupua and Ngā Toka Tupua.

41. While the Whangaehu is not currently listed in Table 14.1 as a targeted WMSZ, the recalibrated CNLMs in Table 14.2 will also apply to new IFLU activity within the catchment. I have considered whether the Panel's decision-making on PC2 will potentially affect the catchment of the Whangaehu River. In my view, PC2 will have a neutral impact on in the catchment of the Whangaehu River and will not compromise Te Mana Tupua or Ngā Toka Tupua.
42. For reasons explained earlier in this Chapter, the recalibrated CNLM values in Table 14.2 will not necessarily result in more N in the waterways. What has changed is the way the Overseer model represents and describes N leaching (the actual N leaching discharged through the root zone of the land is unchanged). PC2 does not authorise intensification of new IFLU activity (PC2 does not alter the rules or policies for new IFLU activities). In my view, PC2 will not have an adverse impact in the catchment of the Whangaehu River and will not compromise Te Mana Tupua or Ngā Toka Tupua.
43. The reason given (on page 6) of submission S63 for requesting withdrawal of PC2 is to allow time for the establishment of Ngā Wai Tōtā. This is to be a strategic leadership partnership between iwi, Horizons and district councils in Te Waiū-o-Te-Ika. I understand that the entity has not yet been established. Given the neutral impact, my view is that any decision to withdraw or delay determination of PC2 would need to be carefully considered. PC2 is not seeking to redefine the values within the catchment or revisit the fundamental approach of the One Plan for the management of IFLU activities within the catchment. The review that Horizons has to undertake to give effect to the NPSFM 2020 will be the opportunity to do that in a constructive manner.

10.10 Recommendations

44. For the reasons explained in the foregoing paragraphs, I recommend that:
 - (a) The submission of Joanne Heperi (S71.1) be **accepted in part** to the extent that PC2 is confirmed in modified form; and
 - (b) The further submissions of the Water Protection Society (FS2.71.1) and Horowhenua District Council (FS21.71.1) in support of submission S71.1 be **accepted in part** to the extent that PC2 is confirmed in modified form; and
 - (c) The submissions of Muaūpoko Tribal Authority (S62), Ngā Waihua o Paerangi Trust (S63.33), Ngāti Turanga (S67), Te Roopū Taiao o Ngāti Whakare Trust (S68), Te Rūnanga o Raukawa (S70), Hokio A Māori Land Trust (S76), Jill Sheehy (S81) and

Tamarangi Hapū of Muaūpoko (S84) be **rejected** to the extent that PC2 is not withdrawn or refused but is confirmed in modified form; and

- (d) The further submission points in support of the submissions listed in (c) above be **rejected** to the extent that PC2 is not withdrawn or refused but is confirmed in modified form; and
- (e) The further submission points opposed to the submissions listed in (c) above be **accepted or accepted in part** to the extent that PC2 is confirmed in modified form; and
- (f) The submissions of Rangitāne o Manawatū (S85.2), Ngāti Turanga (S67), Te Roopū Taiao o Ngāti Whakare Trust (S68), Te Rūnanga o Raukawa (S70) and Jill Sheehy (S81) be **rejected** to the extent that PC2 is confirmed; and
- (g) The further submission points in support of the submissions listed in (c) above be **rejected** to the extent that PC2 is confirmed; and
- (h) The further submission points opposed to the submissions listed in (c) above be **accepted**.

11 Opposition in Principle to the One Plan LUC Approach and the Alternative Approach Proposed for Agriculture

1. This section provides an analysis of submissions that oppose the One Plan LUC approach to managing IFLU and seek an alternative approach for agriculture.

11.1 Relief Requested and Issues Raised

2. The submissions oppose the One Plan's reliance on the LUC approach that underlies the Table 14.2 N leaching limits. Some submitters support the alternative approach advanced by Dairy NZ and Federated Farmers NZ.⁴⁷ The submission of Vincent John Payne objects to the purpose of PC2 in principle and requests deletion of Table 14.2.
3. Some submitters are prepared to accept PC2 as an interim 'fix', on the basis that it will inject some certainty into a currently uncertain regulatory regime. The submissions of Dairy NZ and Federated Farmers NZ request that Table 14.2 cease to be applicable after 30 June 2023. I understand that this 'end date' is intended as an incentive to ensure that Horizons undertakes a comprehensive review of the LUC approach, including consideration of other alternatives, by that date. I also understand that the date was selected because it matches the date by which the new NPSFM was expected (at the time of submissions on PC2) to require regional councils to publicly notify plans or plan changes to give effect to the new NPSFM.
4. The submissions on this point are summarised in the following table:

Submitter	Sub No.	Summary of Reasons for Opposition in Principle to the One Plan LUC Approach	Supported and Opposed (in part or entirely) by:
Lisa Charmley	3	Prefers the approach proposed in the submissions of Dairy NZ (S40) and Federated Farmers NZ (S58). Submission Point 3.7: accepts that PC2 is an interim solution (but a more durable and appropriate solution is a priority for the whole community).	
Dairy NZ	40	Proposes alternative policy and rule framework: Does not support One Plan's wider water management framework nor the LUC approach underpinning the nitrogen leaching limits in Table 14.2. Requests that Table 14.2 apply only until 30 June 2023.	

⁴⁷ In summary: to insert into the policy and rule framework an alternative controlled activity consenting pathway for dairy IFLU that reduces N leaching to, the lesser of, 90% of baseline or the 75th percentile N leaching for the relevant surface water management zone.

Submitter	Sub No.	Summary of Reasons for Opposition in Principle to the One Plan LUC Approach	Supported and Opposed (in part or entirely) by:
Ian Grant and Shirley Cumming Neil Filer	47 69	Supports the submissions lodged by Dairy NZ and Federated Farmers NZ (s40 and S58) and the alternative approach they propose. Particularly concerned about: – Significant negative effect on rural communities – Cost and practicality (including the cost of obtaining consent) – The effect on farm business of meeting Table 14.2 – Uncertainties associated with submitting and complying with a NMP – Uncertainties associated with future Overseer version changes – The lack of science and monitoring at sub-catchment level and lack of relationship between Table 14.2, N leaching on farm and desired water quality objectives.	
Sarah von Dadszen	48	Supports the submissions lodged by Dairy NZ and Federated Farmers NZ (S40 and S58) and the alternative approach they propose. Agrees with Dairy NZ and Federated Farmers not to lock farmers into the Table 14.2 CNLMs or require farmers to meet the Table 14.2 targets. Does not see N as being the big issue it is made out to be (phosphates and sediment can be but N on its own is not the worst thing for our rivers). Also concerned about the reliance on OVERSEER® (which was not developed for this regulatory purpose). Need reasonable time frame for reductions to occur. Agrees that PC2 is an interim solution and that a more durable and flexible solution needs to be developed as a priority. Cannot look at N in isolation.	
Geoff and Cynthia Kane	49.2	Supports the submissions of Federated Farmers and Dairy NZ (S58 and S40) that propose an alternative pathway (10% reduction and 75 th percentile).	
John Lamason	50.1	The PC2 changes are stressful and are having a big impact on their community. The uncertainty of the science and monitoring and leaching is confusing. Why not amend the One Plan policy to provide a discretionary consent pathway that will give us some peace of mind?	Opposed by: Water Protection Society (to the extent the submitters seek a consent pathway for exceedances of Table 14.2) (FS2.50.1)
Russell and Karen Phillips	52	The existing One Plan N rules are not practical or economic to meet. PC2 is more realistic and would be far more effectual and economic in N	

Submitter	Sub No.	Summary of Reasons for Opposition in Principle to the One Plan LUC Approach	Supported and Opposed (in part or entirely) by:
		leaching reduction. However, is also concerned at the retention of the One Plan LUC approach through Table 14. Agrees with Dairy NZ and Federated Farmers that this method needs to be changed (and PC2 does not do this).	
BEL Group	56.2	Supports DairyNZ and Federated Farmers submissions.	Opposed by: Water Protection Society (FS2.56.2)
Federated Farmers NZ	58	Para. 1.6: The One Plan's foundation on LUC as a proxy for natural capital and a basis to allocation nitrogen is fundamentally flawed. Federated Farmers NZ seeks recognition that Table 14.2 is interim and proposes an alternative approach to N loss management and proposes retention of Table 14.2 and the associated rules and policies but only until 30 June 2023.	
Vincent John Payne	73	Delete OVERSEER® and table of LUC. Objects to the purpose of PC2. Overseer is not fit for purpose.	

5. The submissions raise the following issues:

- (a) PC2 as an interim initiative;
- (b) The alternative Dairy NZ and Federated Farmers NZ approach; and
- (c) The request to delete Table 14.2.

11.2 Discussion: (a) PC2 as an Interim Initiative

- 6. The acceptance of some of the submitters of PC2 as an interim 'fix' is pragmatic and constructive. Most, but not all, of the RMA Planning experts agreed at expert conferencing that PC2 is preferable to the operative One Plan for an interim period.
- 7. Section 80A (4) of the RMA (inserted by the Resource Management Amendment Act 2020) requires that Horizons must publicly notify a plan or plan changes to give effect to the NPSFM 2020 no later than 31 December 2024. As part of its Action for Healthy Waterways initiatives, the government has also introduced NSEFM which include restrictions to be automatically included in regional plans on 3 September 2020. These include restrictions on agricultural intensification (clauses 15 to 36). These restrictions are automatically revoked on 1 January 2025.

8. Dr Peet explains in his section 42A report that PC2 was advanced by Horizons as an interim 'fix' and I agree with the submitters that it should prevail only for an interim period. Dr Peet's section 42A report outlines the process Horizons has currently under way to implement the engagement processes required by the NPSFM to develop One Plan objectives, policies and rules to implement the NPSFM 2020. My expectation is that this process will include a full review of whatever provisions are included as a result of PC2. The requirement to engage with the community will ensure that the matters of concern to these submitters will be able to be traversed at that time.
9. In this respect, my expectation is that the PC2 provisions will be interim. They will prevail only until the One Plan provisions are superseded by whatever provisions emerge from the future 'freshwater planning instrument' and freshwater hearings process required by the amended RMA. This will be longer than 2025 (because the freshwater hearings will take some time). My view is that it will be important to have the regulation provided by PC2 during this interim period. But also, that the process will ensure the PC2 provisions are revisited and replaced within a time frame that is not unreasonably long. For these reasons, I do not consider it is necessary or appropriate to include a 'sunset' date on which Table 14.2 ceases to have effect. I do, though, recommend dates by which applications should be lodged and on-farm GMPs and BMPs adopted (in an effort to make progress with land use management change).

11.3 Discussion: (b) Alternative Dairy NZ and Federated Farmers NZ Approach

10. I set out in **Attachment G1** the amendments to Rule 14-1 requested by Dairy NZ and Federated Farmers NZ (annotated onto the publicly notified PC2 provisions). There are minor differences between the relief requested by each, but the submitters essentially request the same thing: an alternative controlled activity consenting pathway for dairy IFLU that reduces N leaching to, the lesser of, 90% of baseline or the 75th percentile N leaching for the relevant surface water management zone.
11. My opinion is that the alternative controlled activity pathway proposed by Dairy NZ and Federated Farmers NZ has merit as an interim measure, on the same basis that PC2 is considered an interim measure. The Scenario Modelling Report indicates that this alternative approach could result in similar or better outcomes in the targeted water management sub-zones. This is illustrated by comparing the 'dairy sector pathway' and 'proposed year-20 pathways' in Table 3 of that report.
12. Having considered the issues discussed in submissions opposed to PC2, Dr Peet's section 42A report and the joint witness statements of the Farm Systems experts, I consider that it is important that the PC2 provisions are clear that GMPs and additional measures are going to be required to meet the N leaching limits. Also, the PC2 provisions should clarify that applications to exceed N leaching limits will be required to demonstrate that they intend to implement additional measures (including BMP) to

reduce N leaching to the best extent practicable given the particular geo-physical conditions of the land. The text of the publicly notified PC2 alludes to this but I have some suggestions (set out in **Attachment G2** to this report) to make that even more explicit. With those amendments, and other discussed below at the recommendation of Associate Professor Horne, I support the Dairy NZ and Federated Farmers NZ alternative approach.

13. The structure of the One Plan Chapter 14 IFLU policies is that:
 - (a) Policy 14-5 sets out how IFLU activities are to be regulated and provides for exceptions only in limited circumstances – one of those exceptions is created by referring to circumstances detailed in Policy 14-6; and
 - (b) Policy 14-6 sets out the things that must be done and the matters that must be considered in making decisions and setting conditions on IFLU applications and also sets out the exceptions that may be made to Policy 14-5.
14. The structure is a little confusing. It would perhaps be tidier if Policy 14-5 set out how IFLU activities are to be regulated, including detailing the exceptions that may be made, with Policy 14-6 detailing the matters that have to be considered and the minimum requirements for compliant IFLU activities and for exceptions. However, PC2 retains the One Plan structure and specifies the exceptions in Policy 14-6. The alternative controlled activity provision requested by Dairy NZ and Federated Farmers NZ is not an ‘exception’ in this sense and I agree with the submitters that it should be detailed as a consenting pathway in Policy 14-5 and in Rules 14-1 to 14-2A.
15. Associate Professor Horne has provided, in his section 42A report, his estimate of what range of N leaching reduction is achievable for different pastoral farm systems by implementing a mix of recommended GMPs and BMPs. Associate Professor Horne estimates that, for IFLU activities (excluding CVG) that cannot meet the Table 14.2 CNLMs, implementation of appropriate GMPs and BMPs should result in N leaching loss reduction of 10% to 20%. He recommends this as a range of estimated N leaching reduction and explains that a single figure would not necessarily promote the improvements required (and achievable) using GMPs and BMPs. His point is that N leaching reduction relies on implementation of GMPs and BMPs and these need to be front and centre in any policy and rule framework.⁴⁸
16. For dairy IFLU activities, Associate Professor Horne supports the approach of Dairy NZ and Federated Farmers NZ (S40 and S58) that the 25% of IFLU activities with the greatest N leaching losses should be expected to reduce their N leaching so that it is no worse than the 75th percentile for the relevant water management unit. However, he

⁴⁸ Paragraphs 87- 89 of Associate Professor David Horne’s section 42A report.

considers that IFLU activities that cannot meet the Table 14.2 CNLMs should be expected to implement GMPs and BMPs so as to achieve N leaching reduction in the range 10% to 20%. Associate Professor Horne anticipates that irrigated sheep and beef IFLU and arable IFLU activities will be able to make significant reductions in N leaching using GMPs and BMPs.

17. I have adapted Associate Professor Horne's recommendations in the proposed new controlled activity rule I include in **Attachment G2** (building on the alternative controlled activity pathway proposed by Dairy NZ and Federated Farmers NZ) by inserting a requirement for implementation of GMPs and BMPs. For completeness, I set that out again here: below:

- (a) The *nutrient management plan** prepared under (a) must demonstrate that the nitrogen leaching loss from the activity will:
- i. not exceed the *cumulative nitrogen leaching maximum** specified in Table 14.2; or
 - ii. be reduced by the implementation of good management practices* and best management practices* to a rate that is the lesser of
 - a. a leaching rate that is between 80% to 90% of the *nitrogen leaching baseline** of the *land*[^] or
 - b. the 75th percentile nitrogen leaching loss for the relevant *surface water management zone**;

18. The reserved matters for this proposed rule include:

Control is reserved over:

- (a) the **contents**, implementation and review of the *nutrient management plan** for the *land*[^]
- (b) ~~compliance with the *cumulative nitrogen leaching maximum** specified in Table 14.2~~ the nitrogen leaching loss from the *land*[^] and the *good management practices**, *best management practice* (and additional measures where necessary) to limit nitrogen leaching loss from the *land*[^] and to avoid, remedy or mitigate nutrient leaching and run-off, faecal contamination and sediment losses from the *land*[^]

.....

19. Definitions for 'nitrogen leaching baseline' and '75th percentile nitrogen leaching loss' are suggested in the submissions of DairyNZ and Federated Farmers NZ and I consider they are broadly fit for purpose, used in the above rule:

'Nitrogen baseline'

*'means the discharge of nitrogen below the root zone, as modelled with Overseer, or equivalent model approved by the Chief Executive of Horizons Regional Council, for the period 1 July 2012 to 30 June 2013. If an updated version of Overseer is issued, the most recent version is to be used to recalculate the **nitrogen baseline*** using the same nitrogen related farm input data as used for the 1 July 2012 to 30 June 2013 period.'*

'75th percentile nitrogen leaching loss'

*'means the 75th percentile value (units of kg N/ha/year) of all of the *nitrogen baseline** values for dairy farming activities in the *Surface Water Management Zone** as determined for each*

Surface Water Management Zone. The 75th percentile nitrogen leaching loss* is recalculated each time the nitrogen baseline is updated following release of a new version of Overseer.*

20. I note that while the proposed definition of 75th percentile nitrogen leaching loss refers to dairy farming activities, the alternative controlled activity that I propose is not exclusive to dairy farming (and they will not be the only IFLU activities in a surface water management zone necessarily). I suggest that dairy farming be amended to “IFLU activities”. The above combination of requirements will, in my view, ensure that GMPs and BMPs are required and that they will achieve a minimum N leaching loss reduction. In this respect, I consider the amendments I propose are more certain than and provide a more appropriate regulatory framework than the PC2 provisions.
21. I have set out the particulars of this consenting pathway in **Attachment G1**.
22. The submissions of Dairy NZ and Federated Farmers NZ identified some minor errors in the drafting of the PC2 rules. I have addressed those as appropriate in **Attachment P**, alongside the substantive amendments required to insert the alternative controlled activity pathway for dairy IFLU activities discussed above. I also recommend in **Attachment O** the additional definitions associated with these recommended amendments.
23. **Attachment G2** contains recommended amendment to respond primarily to the relief requested by submissions S40 and S58 to Policies 14-5 and 15-6, the rules and definitions. Additional amendments to the policies and rules are also required, in my view, to also address issues raised in other submissions (and these are discussed and detailed in later chapters of this report).

11.4 Discussion: (c) Delete Table 14.2

24. I do not support the deletion of Table 14.2 requested by Mr Payne (S73). Deletion of Table 14.2 would leave the One Plan with no basis for regulating new or existing IFLU activities and would be contrary to the explicit intention of RPS Policy 5-8.

11.5 Recommendations

25. For the reasons explained in the foregoing paragraphs, I recommend that:
 - (a) The following submissions and further submissions be **accepted in part** to the extent that PC2 is confirmed with amendment, including insertion of the amended version of the Dairy NZ and Federated Farmers NZ alternative approach as set out in **Attachment G2** to this report:

- i. The submissions of Lisa Charmley (S3), Dairy NZ (S40), Ian Grant and Shirley Cumming (S47), Neil Filer (S69), Sarah von Dadelszen (S48), Geoff and Cynthia Kane (S49.2), John Lamason (S50.1), Russell and Karen Phillips (S52), BEL Group (S56.2), Federated Farmers (S58).
- (b) The further submission points opposed to the submissions identified in (a) (i) be **rejected** to the extent that PC2 is confirmed and includes a consenting pathway for IFLU activities that do not meet the Table 14.2 CNLM limits; and
- (c) The submission of Vincent John Payne (S73) be **rejected**.

12 Requests for a Tailored Approach for Commercial Vegetable Growing

1. This chapter provides an analysis of submissions requesting alternative consent pathways for CVG.

12.1 Relief Requested and issues raised

2. The submissions all request insertion of variants of an alternative, controlled activity, consent pathway tailored for CVG in addition to the Table 14.2 limits. The relevant submissions are summarised in the following table:

Submitter	Sub No.	Summary of Reasons (Commercial Vegetable Growing)	Supported and Opposed (in part or entirely) by:
Griffins Foods	1	Not all rural production activities are equal in value or equal in environmental effects. PC2 fails to recognise the value of the region as a food source. A tailored approach is required for managing CVG land to realise its food production purpose, while achieving catchment-wide water quality improvements. Supports growers adopting GMP. PC2 fails to incentivise and enable existing areas of potato crops to move onto suitable land in a different catchment. Supports the submissions of Potatoes NZ and Hort NZ.	
Pro-forma submissions	6 to 39	Seek provisions to enable existing areas of vegetable growing to move onto different land, to account for crop rotation, leased land arrangements and to enable growers to move to less environmentally sensitive locations. Support growers adopting GMP.	Opposed by: Water Protection Society (to the extent exceptions are requested from Table 14.2) FS2.6.2 to FS2.39.2) Supported in part and opposed in part by: Federated Farmers NZ to the extent priority is given to one land use over another (FS11.6.2 to FS11.39.2)
Mike Moleta (Freshpik Farms) Ian Corbetts	41 44 78.1	Not all rural production activities are equal in value or equal in environmental effects. PC2 fails to recognise the value of the region as a food source. A tailored approach is required for managing CVG land to realise its food production purpose, while achieving	Supported by: Potatoes NZ (FS12.41.3) Supported in part and opposed in part by: Federated Farmers NZ (FS11.41.3 allow except

Submitter	Sub No.	Summary of Reasons (Commercial Vegetable Growing)	Supported and Opposed (in part or entirely) by:
Tony Parlato (Parlato Farming Co.)		catchment-wide water quality improvements. Has concerns about Overseer as a reliable modelling tool for horticultural crops. PC2 fails to incentivise and enable existing areas of potato crops to move onto suitable land in a different catchment. Proposes alternative framework of policies and rules to provide explicitly for CVG. Support growers adopting GMP.	where priority is given to one land use over another) Opposed by: Water Protection Society (in respect of any request for exception to Table 14.2) FS2.78.1
Ohakune Growers Association Tararua Growers Association	43.1 60.1	PC2 will not provide a controlled activity or RDA consenting pathway for vegetable growers. One Plan policy refers to the productive capability of the land, yet caps productivity at productivity for dairy farming. Vegetable growing is a more productive land use than dairy farming and occupies the land with the highest potential productive capacity. The One Plan CNLMs strip the productive capacity of some of the most highly productive land in NZ and undermine the potential of the highly productive land resource within target catchments. Not all rural production activities have equal value to the community. The assessment process underpinning PC2 is not adequate to justify driving land use change away from vegetable growing or to require uncoded mitigation measures. Provisions should enable existing areas of vegetable growing to move onto different land and allow for rotational growing. Supports growers adopting GMP.	Supported by: Horticulture NZ (FS4.43.1, FS4.60.1) Pescini Brothers Ltd (FS6.60.1) Woodhaven Gardens (FS8.60.1) Supported in part by: Horowhenua DC (FS32.43.1, FS25.60.1) Opposed by: Water Protection Society (opposing exceptions to Table 14.2) FS2.43.1, FS2.60.1
Arawhata Wetland Alliance Group (AWA Group)	46.1	Requests that PC2 be withdrawn: AWA Group is concerned that PC2 forecloses opportunities for proposals that could substantially reduce overall N leaching and remove sediment, phosphorus and nitrates.	
Woodhaven Gardens Ltd	57	Page 2 bullet-point 2: The LUC system does not adequately recognise the difference in productivity of commercial vegetable growing land compared to dairy land use. Proposes alternative provisions for CVG (S57.3). Supports growers adopting GMP.	Supported in part by: Horticulture NZ (FS4.57.1 to FS4.57.7) Potatoes NZ (FS12.57.7) Opposed by:

Submitter	Sub No.	Summary of Reasons (Commercial Vegetable Growing)	Supported and Opposed (in part or entirely) by:
			Forest & Bird (FS1.57.1 to FS1.57.7)
Horticulture NZ	66 66.1- 66.3 66.6- 66.15	PC2 fails to provide clarity as to what is and what is not commercial vegetable growing and fails to address particular issues for CVG. PC2 does not acknowledge fundamental ineffectiveness of Overseer as a tool for calculating N leaching for CVG. Proposes alternative policies and rules to explicitly provide for CVG. Supports growers adopting GMP. Requested alternative framework for existing CVG within targeted water management sub-zones includes BMP as a reserved matter for controlled activity consent pathway.	Supported by: Pescini Brothers (FS6) Woodhaven Gardens (FS8) Supported in part by Horowhenua DC (FS26) Opposed by: Forest & Bird (FS1) Water Protection Society (FS2) Director General of Conservation (FS3) Federated Farmers NZ (FS11) Opposed in part by: Dairy NZ (FS9)
Potatoes NZ	75 75.1- 75.10 75.14 – 75.15	Not all rural production activities are equal in value or equal in environmental effects. PC2 fails to recognise the value of the region as a food source. A tailored approach is required for managing CVG land to realise its food production purpose, while achieving catchment-wide water quality improvements. Overseer is ineffective in modelling horticultural crops. PC2 fails to incentivise and enable existing areas of potato crops to move onto suitable land in a different catchment. Proposes alternative framework of policies and rules to provide explicitly for CVG. Supports growers adopting GMP.	Opposed by: Forest & Bird (FS1) Water Protection Society (FS2 in relation to requests for exceptions from Table 14.2) Horticulture NZ (FS4) Supported in part and opposed in part by: Woodhaven Gardens (FS8) Pescini Brothers (FS6) Federated Farmers (FS11) Horowhenua DC (FS27)

3. There is strong alignment between the submissions on the following points:

- (a) The assertion that not all rural production has equivalent food value or environmental effects, that PC2 fails to recognise the value of the region as a food source, fails to recognise the particular crop rotation needs of CVG and fails to provide a viable consent pathway for CVG;
- (b) Support for CVG activities operating using GMPs (although I note that the relief requested in the submission of Horticulture NZ (S66) and Woodhaven Gardens Ltd explicitly reference BMP as a minimum standard for their proposed controlled activity consent pathway for CVG within the targeted water management sub-zones);

- (c) Overseer has limited utility for modelling the N leaching loss of CVG;
- (d) PC2 fails to provide for or incentivise the movement of CVG onto suitable land in different catchments and provision should also be made in the PC2 provisions for new CVG IFLU activities
- (e) PC2 forecloses opportunities for proposals that could reduce N leaching and remove sediment, phosphorus and nitrates at a catchment scale;
- (f) There are particular issues of crop rotation (particularly for potato crops) which need to be addressed in the PC2 provisions; and
- (g) The submissions of Horticulture NZ (S66) and Potatoes NZ (S75) also request permitted activity provision for some types of CVG.

12.2 Discussion: (a) Failure to Provide a Viable Consent Path for CVG

4. PC2 explicitly addresses the problem found in the Chapter 14 provisions (described earlier) by inserting rules and policy support for a discretionary activity consent path for existing IFLU activities that exceed the Table 14.2 CNLM limits.
5. I understand that Horizons considered that this pathway would provide for all forms of IFLU and therefore PC2 provided benefits for CVG. However, commercial vegetable growers and CVG sector representatives have emphasised in pre-hearing discussions that the option of a discretionary activity consent is not viewed as workable. The perception of growers is that the PC2 policy amendments emphasise the extent of non-compliance with Table 14.2. Growers have a view that the intention is to force N leaching from CVG intensive activities down to meet the Table 14.2 limits. Growers believe that their activities simply cannot meet those limits. The Farm Scale Financial Impact Model Report (the “WSP Report”) prepared by WSP and discussed in the section 42A technical reports of Mr McNally and Dr Jolly is more optimistic. It demonstrates that several CVG crop rotations, including crop rotations dominated by potatoes, are able to implement GMPs and BMPs that would achieve the Table 14.2 limits.
6. I acknowledge that CVG has particular challenges, including the need for crop rotations (and particularly so for potatoes) and that this drives changes in growing area between seasons, dependant on land availability. I accept that these challenges create more variables than perhaps for other forms of IFLU, such as dairy farming.
7. It is important to note that these submissions have not sought to completely exclude CVG from the Chapter 14 provisions. Alternative regulatory approaches are proposed in the submissions of Woodhaven Gardens (S57), Horticulture NZ (S66) and Potatoes NZ (S75). Although S66 and S75 request exclusion from the Chapter 14 policies, they

each propose inserting new policies and rules explicitly for CVG49 to address N leaching loss, including an alternative controlled activity pathway. My view is that a tailored approach for existing CVG IFLU can be accommodated within the established policies and rules of Chapter 14 and is within scope.

8. I have recommended a tailored controlled activity consent pathway for CVG. It is my opinion that this alternative pathway could also give effect to the relevant higher order planning instruments, provided it can be demonstrated to actually result in meaningful N reduction in sensitive target water management sub-zones. This requirement is supported by Horizons' state of the environment monitoring. The attachments to the joint witness statement (dated 28 July 2020) of the Water Quality experts confirm that water quality in many of the targeted water management sub-zones is degraded; failing to meet One Plan Schedule E targets by more than 50% in many instances. Dr Snelder's section 42A report summarises the trend statistics for SIN (which is relevant for the N focus of Table 14.2).⁵⁰ Figure 5 in Dr Snelder's section 42A report indicates that for the target catchments, confidence that the SIN trend was improving was at least 'Likely' for 58% of sites. For these catchments only 9% of sites were at best 'Unlikely' to be improving, indicating they were at least 'Likely' to be degrading.
9. Water quality in the Lake Horowhenua sub-water management sub-zones is seriously degraded (Appendix 1 map 51 showing current state relative to target). While there are many sources of contaminant, including historical sources, and the reasons for water quality degradation in all catchments are complex, there remains a need to address N loads in those catchments alongside other contaminants. Nitrogen is the 'trigger' contaminant used in Table 14.2 and is the primary focus of PC2.
10. In my opinion, any alternative controlled activity pathway for CVG can only be supported if it demonstrates that it will contribute substantive N leaching reduction (less SIN in surface water). The key requirements of the alternative controlled activity pathway are, in my view:
 - (a) Achievement of a specified minimum N leaching reduction (either as a percentage reduction from baseline or an absolute kg N/ha/year reduction from baseline);
 - (b) Implementation of BMP to achieve that minimum N leaching reduction (i.e. actual land management practice improvement);
 - (c) Selecting the appropriate baseline growing period, to ensure that the provisions do not inappropriately authorise CVG expansion that has occurred since the One Plan became operative;

⁴⁹ This contrasts with the requests of the joint territorial authorities which seek exclusion but do not propose replacement with policies or rules that explicitly address N leaching from IFLU.

⁵⁰ At paragraph 40 of Dr Snelder's section 42A report.

⁵¹ Attached to the 28 July 2020 Water Quality joint witness statement.

- (d) Defining the baseline to limit the total growing area to ensure that areal expansion is addressed as 'new' IFLU activity as intended by the One Plan;
 - (e) Requiring applications to be lodged as soon as possible (I note that the RMA Planning experts agreed that a period up to two years would be reasonable');⁵²
 - (f) Requiring implementation of BMP within the shortest practicable time frame, in order to achieve N reduction as soon as reasonably practicable (in this respect I consider a time period much shorter than the 10 years discussed by the Farm Systems experts⁵³ is reasonable. I note that the WSP Report and Dr Jolly anticipate that most GMP and BMP practice change can be adopted within three years (except for the implementation of controlled trafficking where machinery upgrades are required and involve significant capital investment));⁵⁴
 - (g) Including requirements to adopt GMPs and BMPs to maximise N reductions.
11. One of the central concerns of other submitters is the lack of certainty in the PC2 framework about the extent of exceedance of N leaching limits contemplated by PC2, through the discretionary pathway. In my opinion, incorporating the above matters could in address these concerns.
 12. I include in **Attachment H1** some suggested wording of policies and rules incorporating the above requirements. The minimum N leaching reduction matches that identified in the WSP Report and in Dr Jolly's section 42A technical report. The intention is to create an alternative controlled activity consent pathway for CVG, but only where it implements BMP and the application is lodged within two years. Applications that do not adopt BMP, or are not lodged within the two-year timeframe, would fall to be considered under the discretionary activity pathway. In my opinion, the limits I propose for the controlled activity pathway provided greater certainty of outcome for CVG, than the discretionary activity pathway presently proposed under PC2.
 13. The suggestion included in **Attachment H1** builds on the suggestion in **Attachment G2** for agricultural IFLU activities. It adapts a draft suggestion that I circulated to the RMA Planning experts for discussion during expert conferencing. The suggested wording in **Attachment H1** has been further refined since expert conferencing. I note that the experts were supportive of further conferencing to test and refine any further recommended changes to the version I circulated in August (and these are captured in **Attachment H1** for discussion purposes).

⁵² Answer to Question 16 (page 16) RMA Planning Joint Witness Statement 20.08.20.

⁵³ Answer to Question 6 (page 10 Farming and Growing Management Practice Joint Witness Statement 12.08.20).

⁵⁴ WSP report *Horizons Regional Council – Proposed Plan Change 2 Farm Scale Financial Impact Model* (WSP August 2020).

14. I have considered whether PC2 should explicitly address the values of domestic food production and food security. I note that the NPS-FM 2020 identifies the two Lake Horowhenua water management sub-zones as 'specified vegetable growing areas' (in Appendix 5 of the NPS-FM). Policy 3-33 of the NPS-FM 2020 requires that, when implementing the NPS-FM, Horizons must have regard to the importance of the contribution of the 'specified vegetable growing area' to the domestic supply of fresh vegetables and to maintaining food security for New Zealanders. However, PC2 is not intended to implement the NPS-FM 2020, and the RMA Planning experts agreed in their joint witness statement of 20 August 2020 that the only aspect of the NPS-FM 2020 that is relevant is the Objective.
15. Acknowledging the 'direction of travel' in the NPS-FM I have considered how the submitters' concerns could be addressed. The operative One Plan already recognises the value of 'domestic food supply' as one of the Schedule B values (Schedule B, page B-1). Figure B:13 on page B-113 maps where the value is presently recognised (which includes some targeted water management sub-zones, including Lake Horowhenua). The particular nature of the values are explained in the far right column of the Schedule B Table B.13. For example, in the Lake Horowhenua Hoki_1a WMSZ, the value is 'vegetable production'. Schedule B picks up the growing areas discussed in the WSP Report (Hoki_1a, West_8, West-(a and West_9b) and also applies to other vegetable growing areas in the Region. These identified values will be relevant when considering applications for discretionary activity consents under the PC2 framework.
16. Horticulture NZ's submission (page 10 S66) does not consider the Schedule B description of values is sufficient. As I have noted, its submission seeks policy acknowledgment of inter-regional domestic food supply values to support population growth during the life of the One Plan. I agree that the Schedule B value does not fully address inter-regional food security. I propose a further amendment to Policy 14-6 that acknowledges food security (adopting the wording of the NPS, in preference to that in S66). In doing so, I do not consider it is reasonable to discriminate between food types (e.g. by making the consideration specific to vegetables). I expect this value will be explored more fully in Horizons' work to implement the NPS-FM.

12.3 Discussion: (b) GMP or BMP

17. I have proposed a controlled activity consent pathway that is based on CVG adopting BMP and achieving minimum N leaching reduction. This follows on from and adapts the suggestions of Woodhaven Gardens Ltd (S57) and Horticulture NZ (S66).
18. Potatoes NZ (S75) proposes a different approach based on GMP. I understand that GMP is preferred by Potatoes NZ because it is understood within the sector to be achievable by new entrants to potato growing and matches the level of management practice and debt likely for those new entrants. I accept this point, but also note that, for other CVG

rotations (i.e. not potatoes), GMP alone is unlikely to be sufficient to achieve the substantive N reduction required to support a controlled activity status. I also understand, from the WSP Report that many potato growing rotations may be capable of meeting the (recalibrated) Table 14.2 CNLM limits, without the need for a potato-specific consent pathway.⁵⁵

19. Adoption of BMP as outlined in the WSP Report would result in an estimated average reduction of N leaching of between 35% - 45%.⁵⁶ I acknowledge that WSP's estimates are averaged over typical crop rotations and that they do not represent every single conceivable crop rotation or individual circumstances. I also acknowledge that some BMP may be more difficult to implement on smaller growing areas. However, the requirement for BMP accords with Horticulture NZ's own submission on behalf of the industry and is consistent with current horticulture sector recommendations.⁵⁷ I also note the Page Bloomer Report estimate of 23% to 35% reduction with on farm practices.⁵⁸
20. I am of the opinion that the application of BMP (for a controlled activity pathway) is reasonable. So long as the appropriate baseline growing season is selected for inclusion in the rules, growers who have changed their practices and implemented GMPs and BMPs will not be disadvantaged by the proposed activity pathway. Further support is found in the Page Bloomer Report which identifies⁵⁹ that practices in some growing operations have changed since 2018, resulting in reduced N leaching. The WSP Report adopts a 2014 baseline, which reflects the practices generally in place at the time the One Plan became operative. It is appropriate, in my view, for the rule settings to acknowledge improvements made since 2014.

12.4 Discussion: (c) Utility of Overseer

21. The WSP Report acknowledges that some horticulture crop rotations are not easily modelled using Overseer. It was however accepted by the Farm Systems experts in their joint witness statement (page 17) 21-22 July 2020 that consistency can be achieved with agreed industry 'work-arounds' to standardise practice and reduce potential variations in input data. Dr Jolly comments on this further in her section 42A technical report. The experts also agreed (pages 18 and 19 of the same joint witness statement) that there are other modelling tools available (e.g. APSIM, MitAgator, LUCI, LUCIAG, SPASMO) but that these also have disadvantages, as well as advantages. It was also acknowledged by the experts that those models are not nitrogen focused (rather, they are whole farm

⁵⁵ This conclusion is supported by the WSP report and Dr Jolly's section 42A report.

⁵⁶ *Proposed Plan Change 2 Farm Scale Financial Impact Model* (WSP 2020) Section 9.

⁵⁷ As detailed in the WSP report *Horizons Regional Council – Proposed Plan Change 2 Farm Scale Financial Impact Model* (WSP August 2020) page 10 the GMPs and BMPs considered in the modelling were sourced from the *Horticulture NZ Code of Practice for Nutrient Management 2014* and *NZ GAP Farm Environment Plan* template.

⁵⁸ Referenced in *Proposed Plan Change 2 Farm Scale Financial Impact Model* (WSP 2020) Section 9, and attached to the section 42A technical report of Ms Abby Matthews.

⁵⁹ *Page 2 of Modelled Loss of Nutrients from Vegetable Growing Scenarios in Horowhenua* (Page Bloomer, May 2020).

systems models). Associate Professor Horne discusses this in his section 42A technical report and concludes that Overseer is the best available option at this time. In any event, it cannot be overlooked that PC2 deliberately provides flexibility around reliance on Overseer and explicitly provides for the use of other models (see the proposed PC2 amendments to the definition of 'nutrient management plan').

12.5 Discussion: (d) Incentivising CVG onto Other Land

22. Incentivising CVG onto land outside the targeted water management sub-zones would require shifting and establishing new CVG elsewhere. That is provided for under Rules 14-3 and 14-4. The only change PC2 proposes of relevance for Rule 14-3 is to recalibrate the Table 14.2 values applied under Rule 14-3. PC2 does not seek to alter the policy settings, activity status or other elements applicable to new IFLU activities anywhere in the region (i.e. within or outside the targeted water management sub-zones). My view is that submissions which seek to alter the activity status and policy settings for new IFLU activities are not 'on' PC2 – they are outside the scope of PC2. The relief requested in these submissions does not address a change to the pre-existing status quo advanced by PC2, does not address the purpose of PC2 and raises matters not evaluated through the section 32 evaluation. The changes they propose would permit the One Plan to be appreciably amended without real opportunity for participation by parties that may have an interest in the intensification of farming across the region. This latter point raises questions of fairness.
23. I note the NES-FM also now includes limits on pastoral intensification for new or expanded pastoral IFLU activities (although not CVG intensification). Given the highly confined purpose of PC2, there is better (and more appropriate) opportunity to revisit the policy settings for new IFLU activities (of all types) when reviewing the One Plan to give effect to the NPS-FM.

12.6 Discussion: (e) Catchment Scale Mitigation Opportunities

24. The submissions by Arawhata Wetland Alliance Group (S46) and Horticulture NZ (S66) raise valid points about the potential merits of off-site mitigation, offset or compensation measures that could assist to absorb contaminant flows or divert contaminant flows from surface water bodies. I propose an amendment to Policy 14-6 to facilitate consideration of this form of mitigation or compensation, where relevant (detailed in **Attachment M**).

12.7 Discussion: (f) Crop Rotation

25. The Farm Systems experts agreed (on page 14 of the joint witness statement dated 21-22 July 2020) that there are no particular constraints that apply to commercial vegetable growing in terms of crop rotation, leased land arrangements or the location

relative to markets and processing facilities. I was surprised by that conclusion, given the attention given to this issue on page 26 of Horticulture NZ's submission (S66) and in the submission of Potatoes NZ (S75, particularly the discussion beneath Figure 1). I do not consider it necessary to go to the lengths of devising a rotation management plan as proposed in S75 (noting that the WSP Report concludes that it is likely that most potato rotations would comply with the recalibrated Table 14.2 CNLM limits anyway). However, I agree it would be appropriate to include crop rotation as a consideration in Policy 14-6. The issue of crop rotation is not exclusive to potato growing, so my recommended change does not distinguish that crop.

12.8 Discussion: (g) Permitted Activity Status for CVG

26. The submissions by Horticulture NZ (S66) and Potatoes NZ (S75) propose permitted activity provision for CVG – although for different purposes. The alternative rule framework proposed by Horticulture NZ (S66) includes a permitted activity classification for CVG outside the targeted water management sub-zones. I do not support a permitted activity status for CVG because it is not reasonable to conclude that intensive or extensive CVG will have effects, in terms of N leaching, that are minor or less than minor.
27. In my opinion this request is also not 'on' PC2. PC2 did not seek to alter the activity status of CVG outside the targeted water management sub-zones and did not propose a permitted activity classification for any CVG. The same issues I identify in paragraph 22 above apply.
28. Potatoes NZ's request that CVG on parcels smaller than 4.1ha be permitted under PC2. It seems that the submission is seeking to make it explicit that no consents are required for diffuse discharges from CVG undertaken on small parcels of land. The One Plan's definition of CVG captures only CVG on parcels over 4 ha. However, other rules under the One Plan apply to these activities (e.g. Rule 14-5 which controls the application of fertiliser). It is not apparent why Rule 14-5 should not apply to CVG undertaken on parcels smaller than 4.1 ha.
29. I am again of the opinion that this request is not 'on' PC2. PC2 does not seek to alter the applicability of these other Chapter 14 rules. The reasons I identify in paragraph 22 above are again relevant. I do not support the requested permitted activity provision.

12.9 Recommendations

30. For the reasons explained in the foregoing paragraphs, I recommend that:

- (a) The following submissions and further submission points be **accepted in part** to the extent that PC2 is confirmed in amended form, including amendments to

provide an alternative controlled activity consent pathway for existing CVG within targeted water management sub-zones:

- (i) The submissions of Griffins Foods (S1), individual growers (S6 to S39 inclusive), Mike Moleta (Freshpik Farms – S41), Ian Corbetts (S44), Tony Parlato (Parlato Farming Co. – S78.1), Ohakune Growers Association (S43.1), Tararua Growers Association (S60.1), Arawhata Wetland Alliance Group (S46.1) Woodhaven Gardens Ltd (S57), Horticulture NZ (S66.1 – s66.3, S66.6 – s66.15), Potatoes NZ (S75.1 – s75.10, s74.14, s75.15); and
- (ii) The further submission points that support and oppose the submissions listed in (i) above.

13 Intensive Farming Land Use Activities Associated with Land Irrigation of Treated Municipal Wastewater

- The following table summarises the submission points received on the topic of IFLU activities associated with land irrigation of treated municipal wastewater:

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
Horowhenua DC	42.2	Amend PC2 to exclude WWTP discharges to grazed farmland	Manawatū DC (FS7.42.2)	Forest and Bird (FS1.42.2) Water Protection Society (FS2.42.2) Federated Farmers NZ (FS11.42.2)
Joint territorial authorities	82.1	Amend PC2 to exclude WWTP discharges to land used for grazing	Forest & Bird (FS1.82.1) Fonterra (FS13.82.1) Horowhenua DC (FS18.82.1)	Water Protection Society (FS2.82.1)
	82.2	Provide a planning framework for WWTP discharges to land in conjunction with IFLU activities	Fonterra (FS13.82.2) Horowhenua DC (FS18.82.2)	Water Protection Society (FS2.82.2)
	82.3	Amend PC2 to not restrict the use of land to irrigate treated municipal wastewater	Forest and Bird (FS1.82.3) Fonterra (FS13.82.3) Horowhenua DC (FS18.82.3)	Federated Farmers NZ (FS11.82.3) Potatoes NZ (FS12.82.3)
PNCC	83.1	Amend PC2 to clarify that provisions do not apply to WWTP discharges to land undertaken in conjunction with IFLU activities	Manawatū DC (FS7.83.1) Fonterra (FS13.83.1)	Water Protection Society (FS2.83.1) Federated Farmers NZ (FS11.83.1)
	83.2	Amend PC2 to not restrict use of land for farmed productive use where irrigated with treated municipal WWTP wastewater	Manawatū DC (FS7.83.2) Fonterra (FS13.83.2)	
	83.3	Provide a planning framework for WWTP discharges to land	Fonterra (FS13.83.3)	Water Protection Society (FS2.83.3)
	83.4 83.5 83.6	Insert text into Policy 5-8 (a) (i) (A), Policy 14-5, and Rules to exclude WWTP land discharges	Fonterra (FS13.83.4, FS13.83.5, FS13.83.6)	Water Protection Society (FS2.83.4, FS2.83.5, FS2.83.6)

				Potatoes NZ (FS12.83.6)
	83.7	Insert new Policy 14-2A (consent considerations for WWTP discharges to land)	Fonterra (FS13.83.7)	Water Protection Society (FS2.83.7)
	83.8	Amend the definition of 'Bio-solids'	Fonterra (FS13.83.8)	
	83.9	Amend the definition of 'Fertiliser'	Fonterra (FS13.83.9)	
	83.10	Amend the definition of 'Intensive sheep and beef farming'	Fonterra (FS13.83.10)	
Manawātū DC	87.1	Insert a definition for 'irrigation' that excludes irrigation of treated municipal WWTP wastewater; or Exclude from Policy 14-5 (a) the grazing of land irrigated with treated WWTP wastewater (with explanatory note)	Fonterra (FS13.87.1) Horowhenua DC (FS16.87.1)	Water Protection Society (FS2.87.1.1) Federated Farmers NZ (FS11.87.1)
	87.2	Amend PC2 to facilitate discharge of treated WWTP wastewater to land in conjunction with intensive farming use and remove the need for additional consents where the WWTP discharge is combined with intensive farming land use	Fonterra (FS13.87.2) Horowhenua DC (FS16.87.2)	Water Protection Society (FS2.87.2)
Ruapehu DC	2.7	RDC supports the submission of the joint Councils	Horowhenua DC (FS19.2.7)	Federated Farmers NZ (FS11.2.7)

13.1 Relief Requested

- I set out in **Attachment I1** the specific wording amendments requested in the submissions of PNCC, Manawātū DC and Fonterra. The requested amendments include amendments to the publicly notified PC2 provisions, as well as amendments to definitions that are not changed by PC2 and the insertion of an additional new policy. In addition, the joint Territorial Authorities (the "**joint Councils**"), Horowhenua DC and Manawātū DC requested other changes (broadly, to exclude land irrigation of treated municipal wastewater and to provide a separate framework for land irrigation of treated municipal wastewater) but did not propose specific wording changes for these requests. Fonterra's further submission seeks to expand the separate framework the joint Councils seek for land irrigation of treated municipal wastewater to also include treated industrial wastewater.

3. Ruapehu DC's submission point 2.7 supports the joint Councils submission. The joint Councils', Manawātū DC's and PNCC's submissions are supported by Fonterra (FS13). Forest & Bird's further submission (FS1) supports the joint Councils' request for clarification as to whether municipal wastewater discharges to land are captured in PC2, in circumstances where they are on land that is also used for farming activities. The Water Protection Society (FS2) opposes any exceptions from the Chapter 14 provisions for any IFLU activities. Federated Farmers NZ (FS11) opposes the exclusion of areas that are irrigated with municipal wastewater because it is uncertain how the effects of land irrigation of municipal wastewater are regulated elsewhere in the One Plan. Federated Farmers NZ seeks a regime where all land uses are required to do their part.

13.2 Issues Raised

4. The submissions of the joint and individual Councils highlight the fact that the One Plan captures IFLU activities that are enabled by the irrigation to land of treated wastewater from municipal wastewater treatment plants ("WWTPs"). The high concentrations of nutrients inherent in treated WWTP effluent mean that, when combined with intensive farming, it is extremely difficult for the combined land use and land irrigation activity to meet the Table 14.2 CNLMs⁶⁰. Whereas activities that meet the Table 14.2 limits qualify for consent as controlled activities, non-compliance with Table 14.2 requires consent as a discretionary or restricted discretionary activity (depending on whether the IFLU activity is 'existing' or 'new'). The issue arises for the joint and individual Councils because the One Plan sets a clear policy direction, particularly through RPS Policy 5-11, that the discharge of treated WWTP effluent should be to land in preference to discharge to water.
5. The joint and individual Councils anticipate they will need large areas of land to accommodate the volume of treated wastewater likely to be irrigated to land. The joint and individual Councils see the requirement for additional discretionary activity consents, triggered by non-compliance with the Table 14.2 CNLMs, as an obstacle to securing land for the disposal of treated municipal wastewater by land irrigation.
6. The joint Councils oppose the requirement for a land use consent, for the IFLU component, in addition to the consent required for the discharge to land of treated municipal wastewater, particularly where their nitrogen leaching loss rates are likely to exceed the Table 14.2 limits. They seek to exclude IFLU activities associated with the land irrigation of treated municipal wastewater from the One Plan IFLU provisions. They propose an alternative framework to specifically address the irrigation to land of treated municipal wastewater. In turn, Fonterra seeks to add treated industrial

⁶⁰ This point was agreed by the Farm Systems Modelling experts (last row page 21 and first row page 22 of the Farm Systems Modelling Joint Witness Statement (21 & 22 July 2020)).

wastewater to the joint and individual Councils' proposed provisions for treated municipal wastewater.

7. The four types of farming defined as IFLU activities in the One Plan are dairy farming, commercial vegetable growing, cropping, and intensive sheep and beef farming. However, treated municipal wastewater cannot be irrigated onto dairy land or onto commercial vegetable crops. There are circumstances when irrigation of arable crops (e.g. fodder crops) would also be inappropriate or contrary to health guidelines. I understand that the joint and individual Councils are primarily concerned about the impact of the One Plan provisions on sheep and beef farms that they may seek to acquire or lease for land irrigation of treated municipal wastewater.
8. The One Plan rules apply as follows:
 - (a) the One Plan definition of '*intensive sheep and beef farming*' refers to properties greater than 4 ha engaged in the farming of sheep and cattle, "*where any of the land grazed is irrigated*";
 - (b) the discharge to land of treated WWTP effluent is a form of 'irrigation';
 - (c) Policy 14-5 lists the intensive farming land use activities that are captured by Table 14.2 and the associated policies and rules. The list includes '*intensive sheep and beef farming*';
 - (d) where the sheep and beef farming activity is a *new* activity (e.g. due to irrigation commencing) and the combined nitrogen leaching loss exceeds the Table 14.2 CNLMs, consent is required as a restricted discretionary activity (under operative One Plan Rule 14-4). It is relevant to note that introducing irrigation to an existing, non-irrigated, sheep and beef farm changes the activity to a *new* IFLU activity and triggers One Plan Rule 14-4. PC2 does not propose any changes to operative Rule 14-4;
 - (e) where the IFLU activity is already irrigated, and therefore is an *existing* activity, if the introduction of treated wastewater irrigation causes the combined nitrogen leaching loss for the combined activities (land irrigation + IFLU activities) to exceed the Table 14.2 CNLMs, consent is required as a discretionary activity (under PC2 Rule 14-2A);
 - (f) proposals for land irrigation of treated municipal wastewater will require consent, both, as a discretionary activity (for the end-of-pipe irrigation discharge to land) and as a restricted discretionary or discretionary activity (for the IFLU activity, depending on whether it is a new or an existing IFLU activity). In practice, the activity status will be 'bundled' as a discretionary activity; and

- (g) Policy 14-5(e) becomes live for any discretionary activity application for *new* IFLU activity. It requires that new IFLU activities must be managed to ensure that their nitrogen leaching does not exceed the CNLM values in Table 14.2. This presents a 'catch-22' near-impossible hurdle for IFLU activities that become 'new' by the introduction of wastewater irrigation, because of the acknowledged difficulty in achieving the Table 14.2 CNLM limits and policies that require compliance.
9. This 'catch-22' is not something that PC2 has created. It is a feature of the operative One Plan provisions. What PC2 proposes is a recalibration of the Table 14.2 CNLM values and provision of a clear consenting pathway for *existing* IFLU activities. Although these changes may assist some WWTP land irrigation situations involving existing IFLU activities, it does not address the largest aspect of concern, which is the consenting hurdle for *new* IFLU activities. In this respect, the joint and individual Councils' issue is not with the PC2 provisions themselves but with the fact that they do not go far enough. The purpose of PC2 is limited to addressing *existing* IFLU activities. PC2 does not seek to alter the policy settings for *new* IFLU activities.
 10. The primary issues in contention are:
 - (a) The requests to exclude IFLU activities associated with WWTP treated wastewater discharges to land from the Chapter 14 IFLU provision and to insert a replacement policy framework for consideration of applications for land irrigation of treated municipal wastewater;
 - (b) Fonterra's request to expand that exclusion and separate framework to include irrigation of treated industrial wastewater; and
 - (c) The requested amendments to the definitions of '*bio-solids*', '*fertiliser*' and '*intensive sheep and beef farming*', to exclude discharges of treated municipal and industrial wastewater to land and the requested new definition of '*irrigation*' and the requested exclusion of treated wastewater.

13.3 Discussion: Issue (a) Exclusion & Separate Provision for IFLU Associated with WWTP Land Irrigation

11. The RMA Planners in expert conferencing addressed two questions relevant to this issue:

Question 7 (page 9 of the Planners' JWS): *Should discharges of treated municipal wastewater to land be subject to the intensive farming provisions of the One Plan?*

Question 8 (page 10 of the Planners' JWS): *Should intensive farming land use associated with the irrigation of treated municipal wastewater to land be subject to the intensive farming provisions of the One Plan?*

12. The subtle difference between these questions is important. The end-of-pipe discharges to land of treated municipal wastewater are not themselves captured by the Chapter 14 IFLU provisions or by PC2. Rule 14-28 permits discharges of contaminants onto or into land that may enter water provided the discharge meet specified standards. Rule 14-30 is the (discretionary activity) default rule capturing discharges to land not provided for by Rule 14-28. The RMA Planners agreed, in response to Question 7 above, that discharges of treated municipal wastewater to land are not captured by the Chapter 14 IFLU provisions. They require consent as a discretionary activity under Rule 14-30 on the basis that they are unlikely to meet the permitted activity standards of Rule 14-28.
13. The IFLU activities that are enabled or facilitated by irrigation using treated municipal wastewater are, and in my view should be, captured by the Chapter 14 IFLU provisions. I accept that it will be difficult for a combination of treated municipal wastewater irrigation and IFLU activity to meet the Table 14.2. CNLM limits. However, I consider that this combination of activities should be regulated, alongside all other forms of IFLU. That is the clear intention of the relevant RPS policies and, in particular, Policy 5-8 (a) (iii) which applies to new IFLU:

*Policy 5-8(a) **Nutrients***

...

(iii) *New intensive farming land^ use activities must be regulated throughout the Region to achieve the nitrogen leaching maximums specified in (I).*⁶¹

14. There are no explicit exclusions from this requirement. Other parts of Policy 5-8 and Chapter 14 contemplate different ways of regulating IFLUs in different circumstances (different 'consent pathways') but all are regulated. I do not support the joint Councils' requests to explicitly exclude IFLU activities simply on the basis that they are facilitated by or associated with the land irrigation of treated municipal wastewater. The area of land required to accommodate full or even partial land irrigation of treated wastewater from the municipal WWTPs in the region is potentially extensive. There are sound reasons for preferring land irrigation of treated wastewater over discharge to water, but that does not mean that the additional nitrogen leaching from intensified land use facilitated by irrigation of treated municipal wastewater should be completely unregulated. In many cases the intensification of the farming activity (increased stock

⁶¹ i.e. in Table 14.2.

numbers for example) will only arise because of the irrigation of land with nutrient rich wastewater.

15. The alternative framework proposed by PNCC and supported by the joint and individual Councils addresses the effects of the end-of-pipe discharge and does not, in my view, address the nitrogen leaching loss of IFLU activities that are enabled by the treated wastewater irrigation. In this respect, the proposed alternative framework conflicts with RPS Policy 5-8 (a)(iii).
16. The PNCC submission did request amendment to Policy 5-8, but only to part (a) (i) (A). Part (a) (i) directs how the CNLMs in Table 14.2 are to be set and sub-part (A) requires, in setting the CNLM, all non-point sources of nitrogen in the catchment must be taken into account. PNCC's submission point 83.4 requests that discharges of treated municipal wastewater be excluded and not accounted for as a non-point source of N when establishing the CNLMs under Policy 5-8 (a) (i). I do not support the requested exclusion of WWTP land discharges from the CNLM-setting exercise. They are a potentially material contribution to N leaching loss in some catchments and, in my view, it is appropriate to consistently account for all potential sources of N (and particularly so in the targeted WMSZ).
17. Although the joint and individual Councils' submissions requested an alternative framework for land irrigation of treated municipal wastewater, no explicit changes to Policy 5-8 (a) (iii) were requested. In my opinion, there would need to be some change to Policy 5-8 (a) (iii) to support any exclusion of new IFLU activities enabled by land irrigation of treated wastewater. No change was proposed as part of PC2 as there was no intention to alter the policy framework for 'new' IFLU including new IFLU. Neither was any change to this RPS policy signalled in any submission.
18. I discuss issues with scope and whether the joint and individual Councils' submissions are 'on' PC2 below. I have reached the view that changes regarding 'new' IFLU are not 'on' PC2.
19. I accept the proposition that was put at the RMA Planners' expert conferencing: that regulation of IFLU activities associated with land irrigation of treated municipal wastewater should not necessarily require strict adherence to the Table 14.2 CNLMs. The joint Councils' submissions raise an issue that I consider is potentially a regionally significant resource management issue, given the requirement of RPS Policy 5-11 that discharges of human effluent must pass through land. I am aware that the joint and individual Councils are currently engaged, at varying stages, with seeking consents or consent renewals for WWTPs that currently discharge to surface water. I include in **Attachment 12** a table summarising the location of the joint and individual Councils' WWTPs and the nature of their treated wastewater discharge.

20. Putting the issue of scope aside momentarily, I have turned my mind to what would be required to address the issue of WWTP discharges through PC2. In my opinion, it could be achieved without altering the requirement of RPS Policy 5-8(a)(iii) to regulate all new IFLU activities and within the framework of Policies 14-5 and 14-6. It would require:
- (a) Insertion of an additional alternative consenting pathway in Policy 14-5 for new IFLU activities undertaken in conjunction with the land irrigation of treated municipal wastewater, similar to the one proposed by PC2 for *existing* IFLU activities; and
 - (b) The Policy 14-6 (e) considerations relating to adoption of good management practices and best practicable option for managing nitrogen leaching loss; and
 - (c) Insertion of additional policy considerations for applications involving new IFLU activities undertaken in conjunction with the land irrigation of treated municipal wastewater. These could include elements of the alternative framework proposed by PNCC, for example as suggested in **Attachment I3**.
21. However, there are practicalities that must be considered with any proposed amendments. The area required to accommodate full or even partial land irrigation from the PNCC WWTP proposal could extend to thousands of hectares. Despite this, the joint and individual Councils' submissions are not supported by any analysis of the water quality implications of the suggested alternative policy framework (including consideration of where land irrigation will occur and of water quality impacts transferred between WMSZ). I therefore have an incomplete basis for s 32AA evaluation of the suggested alternative policy framework, and would be unable to conclude that the requested exclusion and separate Policy 14-2A policy framework would be a more appropriate way to achieve the purpose of PC2 or the relevant One Plan objectives. Even if that was not the case, I remain of the view, as set out above, that the joint and individual Councils are challenged by the limited scope of PC2.

13.4 Scope: Issue (a)

22. My view is that amendments to PC2 to include additional considerations addressing the particular circumstances of existing IFLU activities associated with land irrigation of treated municipal wastewater could be within the scope of PC2. That is because PC2 addresses existing IFLU activities, the submissions explicitly signalled the scope of additional considerations sought by the joint and individual Councils, and the amendments could be made within the policy framework proposed by PC2.
23. I include in **Attachment I3** some drafting suggestions that could address existing IFLU activities. I circulated these to the RMA Planners for discussion at an expert conferencing. The representative planners of the respective territorial authorities did not consider the suggested amendments addressed the full breadth of issues (because

they do not address new IFLU activities and retain regulation of IFLU that involves treated municipal wastewater irrigation).

24. My view is that amendments to the One Plan to exclude *new* IFLU activities associated with land irrigation of treated municipal wastewater are not within the scope of PC2.
25. I have considered the well accepted test for determining whether a submission is ‘on’ a plan change:⁶² first, the submission must fall within the ambit of the plan change; and second, the decision maker must consider whether there is a real risk that persons directly or potentially directly affected by the additional changes proposed in the submission have been denied an effective response to those changes. I do not consider the request to exclude WWTP irrigated IFLU activities from regulation under Chapter 14 falls within the ambit of PC2. I am also of the view that there would have likely been other interested persons across the Region who could be directly or potentially affected by the requested relief and who are unaware of the potential change.
26. That is because the explicit purpose of PC2 was limited to recalibrating Table 14.2 and adjusting the consenting pathway only for existing IFLU activities within the targeted WMSZ. As I have noted earlier, PC2 does not propose any change to the RPS approach of regulating all existing IFLU activities within targeted WMSZ and regulating all new IFLU activities throughout the region. The alternative framework and exclusion proposed by the territorial authorities apply to all IFLU (existing and new) associated with wastewater irrigation anywhere in the Region. In this respect, the requested exclusion does not lie between the operative One Plan and PC2. It lies outside, and is not ‘on’, PC2.
27. The suggested alternative policy framework addresses a separate matter that is not signalled in PC2 (end-of-pipe discharges to land) and, in my view, is not ‘on’ PC2. In my opinion the suggested alternative policy framework does not directly address the potential nitrogen leaching loss of IFLU activities enabled by the wastewater irrigation at all (the proposed Policy 14-2A does not refer to land use activities enabled by the irrigation or to nitrogen leaching loss). In this respect, the proposed additional policy does not directly address the provisions or the purpose of PC2. I consider that the alternative policy framework is not an appropriate substitute for the PC2 provisions in relation to IFLU activities enabled by wastewater irrigation. The proposed framework does not lie between the operative One Plan and the PC2 changes and is not ‘on’ PC2.
28. I understand, from pre-hearing meetings, that the joint and individual Councils have a view that by recalibrating the Table 14.2 limits that also apply to new IFLU activities, PC2 has opened the way for changes to the policies and rules for new IFLU activities generally throughout the region. I do not agree with that analysis. PC2 does not

⁶² *Clearwater Resort Ltd v Christchurch City Council* HC Christchurch AP34/02; *Palmerston North City Council v Motor Machinists Limited* [2013] NZHC 1290.

propose any fundamental change to the range of activities defined as IFLU activities or to the policies or rules that apply to new IFLU activities. PC2's purpose is highly confined and, in my opinion, does not contemplate excluding any IFLU activities from the operative framework of policies and rules. This intention is plain in the public notice and PC2's 32 evaluation report. For this reason, I consider there was no notice given to potentially affected parties that an exclusion from regulation for 'new' IFLU Region-wide was also potentially in play.

29. While I do not consider the requested exclusions and alternative policy framework are 'on' PC2, I agree there is merit in addressing the issue raised by the territorial authorities. This option remains available through a separate plan change process. This would allow the issue to be clearly stated, would allow a fit-for-purpose policy response to be developed and would allow for meaningful dialogue between Horizons, the territorial authorities, iwi and interested further submitters in developing a policy response.

13.5 Recommendations on Issue (a)

30. For the reasons explained in the foregoing paragraphs, I recommend that:

- (a) the following submission points that seek exclusion of IFLU activities associated with land irrigation of treated municipal wastewater from the definition of IFLU or from Rules 14-1 to 14-4 or from the ambit of Policies 5-8 (a) (i), 14-3, 14-5 and 14-6 be **rejected**:
 - i. Submission point 42.2 (Horowhenua DC);
 - ii. Submission points 82.1, 82.2 and 82.3 (the joint Councils);
 - iii. Submission points 83.1, 83.2, 83.3, 83.4, 83.5, 83.6 and 83.7 (PNCC);
 - iv. Submission point 87.2 (Manawatū DC);
 - v. Submission point 2.7 (Ruapehu DC);
- (b) The further submission points in support of the submission points listed in (a) (i) to (v) above be **rejected**; and
- (c) the further submissions that oppose the submission points listed in (a) (i) to (v) above and oppose exclusion of IFLU activities associated with land irrigation of treated municipal wastewater from the definition of IFLU or from Rules 14-1 to 14-4 or from the ambit of Policies 5-8 (a) (i), 14-3, 14-5 and 14-6 be **accepted**.

13.6 Discussion: Issue (b) Fonterra's Request to Exclude Treated Industrial Wastewater

31. Fonterra's further submission raised concerns about how the disposal of treated industrial wastewater is provided for in the One Plan. Their further submission points seek to extend the relief requested in the joint and individual Councils' submissions to

exclude both treated industrial wastewater and treated municipal wastewater from One Plan Rules 14-1 to 14-4 and from the ambit of Policies 5-8, 14-3, 14-5 and 14-6. Fonterra's submission also requests that treated industrial wastewater be regulated under the proposed Policy 14-2A suggested in PNCC's submission. For the reasons explained in discussing issue (a), I do not support the requested exclusion of IFLU activities enabled by the irrigation of treated industrial wastewater from the definition of IFLU activities or from the established One Plan framework of Policies 5-8, 14-3, 14-5, 14-6 and Rules 14-1 to 14-4.

32. The expressions 'wastewater' and 'industrial wastewater' are not defined in the One Plan Glossary. Fonterra's further submission discusses 'industrial wastewater' in the context of its own processing sites at Pahiatua and Longburn. However, the expression is not defined in the further submission or limited to Fonterra's processing sites. If included as requested by Fonterra, 'industrial wastewater' could include a very broad range of contaminants from a wide range of industrial activities in locations throughout the region. In the absence of any definition or any information describing the likely extent and nature of the irrigated wastewater, I am not able to advise on what the impact of the requested exclusion and separate provision would be on water quality in the region's catchments. I am also unable to conclude that the requested exclusion and separate provision would be a more appropriate way to achieve the purpose of PC2 or the relevant One Plan objectives.
33. In my opinion the One Plan intention is clear – in RPS Policy 5-8 – that all IFLU activities are to be regulated in accordance with the Chapter 14 rules and policies. For this reason the exclusion requested for IFLU activities enabled by land irrigation of treated industrial wastewater would conflict with Policy 5-8.

13.7 Scope: Issue (b)

34. PC2 does not contemplate any exclusions and PC2 proposes amendments only to the policies and rules regulating existing IFLU activities within the targeted water management sub-zones. The submission is not confined to existing IFLU activities or the targeted WMSZ. In this respect, my view mirrors that which I expressed earlier - that a request to create an exclusion and separate policy framework for new and existing IFLU activities throughout the region is not 'on' PC2.
35. All of the joint and individual Councils' submissions were clear that they related to land irrigation of treated wastewater from a municipal wastewater treatment plant. In seeking to expand the exclusion to a broader range of undefined industrial wastewater, I do not consider that the further submission points are 'on' the original submissions.
36. In my opinion, the further submissions do not address the purpose or the amendments proposed by PC2 and are not within the scope of PC2.

13.8 Recommendations on Issue (b)

37. For the reasons explained in the foregoing paragraphs I recommend that all of the further submission points contained within Fonterra's further submission FS13 be **rejected**.

13.9 Discussion: Issue (c) Definitions of 'Irrigation' and 'Intensive Sheep and Beef Farming'

38. Manawātū DC's submission point 87.1 requests a new definition of 'irrigation' that excludes irrigation using treated municipal wastewater. This request is supported by Fonterra (FS13.87.1) and Horowhenua DC (FS16.87.1) and opposed by the Water Protection Society (FS2.87.1) and Federated Farmers NZ (FS11.87.1). The new definition would mean that sheep and beef farming systems that are irrigated using treated municipal wastewater are not captured by the definition of 'intensive sheep and beef farming', and therefore not captured in the list of IFLU activities in Policy 14-5 or subject to the Chapter 14 IFLU provisions. PNCC's submission point 83.10 requests that treated municipal wastewater be explicitly excluded from the definition of 'intensive sheep and beef farming'. Fonterra's further submission supports these exclusions and requests that treated industrial wastewater also be excluded.
39. I do not support the exclusion specified in the proposed definition requested by Manawātū DC or the exclusion requested by PNCC from the definition of 'intensive sheep and beef farming'. My reasons are as discussed above: The One Plan intention is clearly to regulate all existing IFLU activities within targeted water management sub-zones and all new IFLU activities throughout the region and PC2 does not propose any exclusions. Exclusion, as requested by Manawātū DC would conflict with Policy 5-8 and, in my opinion, goes beyond the scope of PC2. Further, the absence of a definition of 'irrigation' has not been identified as an issue that needs to be addressed in PC2. The One Plan policies and rules appear to work satisfactorily without a definition of 'irrigation'.

13.10 Discussion: Issue (c) Definitions of 'Biosolids' and 'Fertiliser'

40. PNCC's submission requests that treated municipal wastewater be explicitly excluded from the definitions of 'biosolids' and 'fertiliser'. Fonterra's further submission supports these exclusions and requests that treated industrial wastewater also be excluded. Fonterra also requests that the definition of 'fertiliser' be further amended to also exclude any raw or composted biological waste product that is not able to be registered under the Agricultural Compounds and Veterinary Medicines Act 1997.
41. The Chapter 14 IFLU rules refer to 'biosolids' and 'fertiliser' by clarifying that the rules regulating IFLU activities also include the discharge of biosolids and fertiliser associated with that intensive farming. For example, Rule 14-1 states:

The use of land^ pursuant to s9(2) RMA for any of the following types of intensive farming:

- i. dairy farming**
- ii. commercial vegetable growing**
- iii. cropping**
- iv. intensive sheep and beef farming**

that was existing in the Water Management Sub-zones listed in ...Table 14.1 and any of the following discharges pursuant to ss 15(1) or 15(2) RMA associated with that intensive farming:*

- (a) the discharge^ of fertiliser* onto or into land^*
- (b) the discharge^ of contaminants^ onto or into land^*
- (c) the discharge^ of grade Aa biosolids* or compost* onto or into production land^*
- (d) the discharge^ of poultry farm litter* onto or into production land^*
- (e) the discharge^ of farm animal effluent* onto or into production land^...*

42. Irrigated treated municipal wastewater could fall within the definitions of 'biosolid' or 'fertiliser'. It appears that the requested exclusions from definitions are intended to complement the other exclusions sought by PNCC, to ensure that no aspect of land irrigation of treated wastewater is captured by the rules. For the reasons earlier explained, I do not support the exclusion from the Chapter 14 IFLU policies and rules of IFLU activities that are enabled by the land irrigation of treated municipal wastewater. I am not sure the exclusions in these definitions are necessary anyway, because the wording of the rules clearly states that what is captured is the discharge of biosolids and fertiliser that is *associated with the intensive farming activity* (rather than associated with or inherent in the end-of-pipe discharge of treated wastewater).
43. In addition, Chapter 14 includes Rule 14-5 (controlling the discharge of fertiliser) and Rules 14-7 and 14-8 (controlling the discharge of biosolids). If treated municipal wastewater (or industrial wastewater) is excluded from the definitions, as requested, it would cut across the intended rule provisions regulating the discharge of fertiliser and biosolids derived from wastewater in other settings that do not involve IFLU activities. For example, it would mean that the discharge of WWTP sludge to land is no longer provided for as a permitted or restricted discretionary activity (under Rules 14-7 or 14-8) and would have to be considered as a discretionary activity under the Chapter 14 default Rule 14-30. That would be contrary to the intention of the One Plan in my view.
44. PC2 does not propose any changes to the provisions regulating discharges of biosolids and fertiliser (these involve completely different rules from those affected by PC2). The requested changes would have implications far wider than the existing IFLU situations within targeted water management sub-zones addressed by PC2. For these reasons,

my view is that the requested amendments to the definitions of 'biosolids' and 'fertiliser' are not 'on' PC2.

45. The amended wording proposed by PNCC creates confusion because the definition of 'biosolids' is limited only to material derived from a sewage treatment plant. To exclude treated municipal wastewater would directly contradict that limitation. It may be that PNCC meant to clarify that biosolids should not include *liquid* wastewater. However, the requested wording is not that specific.
46. The amended wording of the definition of 'biosolids', requested by Fonterra, is not necessary to achieve the objective of the further submission. That is because the definition of 'biosolids' already states explicitly that biosolids are derived from sewage that does not include products derived from industrial wastewater treatment plants. In my view the requested additional exclusion of industrial wastewater is redundant.
47. Fonterra's requested additional exclusion of any raw or composted biological waste product does not appear to have anything to do with the purpose of PC2 and is, in my view, beyond the scope of PC2.
48. For the reasons explained above, I do not support the requested amendments to definitions proposed by PNCC, Manawatū DC and Fonterra.

13.11 Recommendations on Issue (c)

49. For the reasons explained in the foregoing paragraphs 31 to 41, I recommend that:
 - (a) PNCC's submission points 83.8, 83.9, 83.10 and Manawatū DC's submission point 87.1 be **rejected**; and
 - (b) Further submission points FS16.87.1 (Horowhenua DC), FS13.83.8, FS13.83.9, FS13.83.10 and FS13.87.1 (Fonterra) be **rejected**; and
 - (c) Further submission points FS2.87.1 (Water Protection Society) and FS11.87.1 (Federated Farmers NZ) be **accepted**.

14 Consenting Cost and Uncertainty

1. This chapter addresses submissions that raised concerns about consenting cost and uncertainty. The relevant submissions are summarised in the following table:

Submitter	Sub No.	Issue Raised
Griffins Foods Ltd	1	PC2 will increase production costs and could force crisping growers from the Industry, limiting supply
Lisa Charmley	3	The cost of compliance will have a significant negative effect on rural communities including the costs of the proposal, obtaining consent, assessing environmental effects, the cost of mitigation activities to reduce nitrogen and other nutrients and the cost of a yearly management plan.
BakerAg NZ Ltd	5	Need to clearly show the financial impact of the current One Plan rules vs PC2 rules. The financial impact should include the costs on farm, as well as the costs of applying for consents under PC2. Understand that controlled activity consents should be reasonably straight forward and not too costly. But restricted consents will be very expensive.
Pro Forma Submissions	6 - 39	Plan Change 2 is not adequate to justify driving land use change away from vegetable growing or requiring vegetable growers to invest in uncoded innovations and measures, to achieve unquantified outcomes.
Horowhenua District Council	42	PC2 will have a major disruptive effect on the primary sector in the Horowhenua with horticulture operations not being economically feasible to consent. Will negatively impact local employment and have a knock-on effect outside impacted industries. Economic impacts have not been appropriately considered nor assessed in the s 32 report. Unintended consequence could be to constrain the provision of critical infrastructure to support the community which could act as a development moratorium for Levin. HDC believes other methods should be investigated as part of s 32 report and favours a collaborative planning process.
Ohakune Growers Association	43	The Section 32a assessment did not assess the impact of the intensive farming rule on commercial vegetable growing. The proposed leaching maximums will strip the productive capacity of highly productive land.
Arawhata Wetland Alliance Group	46	Failure to gain consents for existing commercial vegetable growing under PC2 could result in the loss of 15% of NZ's fresh cut vegetable supply, the loss of over 500 jobs in the region and a \$50 million loss in terms of economic impacts. Lack of consultation with Horowhenua producers on PC2 and the short timeframes did not allow for adequate assessment of feasibility and alternate options.
Ian Grant & Anne Cumming	47	PC2 will add to already high costs of compliance by requiring further unknown consents. Also concerned with the cost of assessing environmental effects, the cost of mitigation activities to reduce nitrogen and other nutrients and the cost of a yearly management plan.
Sarah Von Daelzen	48	Additional consents add costs with no benefit to environment and these will impact the number of staff and inputs having a direct flow on to the local community

Submitter	Sub No.	Issue Raised
Geoff and Cynthia Kane	49	Compliance with new N levels proposed are not economically viable
Russel and Karen Phillips	52	Concerned with the cost and practicality of the proposal, including the cost of obtaining consent, the cost of any assessment of environmental effects required, the potential cost if the consent application is notified, and the cost of mitigation activities for reduction of nitrogen and other nutrients. Also concerned with the economic effects of complying with table 14.2, making an annual NMP and the cost and uncertainty associated with making a discretionary activity consent.
Andrew Day	53	Supports the introduction of a nutrient traceable policy and rule to help reduce the economic cost of PC2.
Woodhaven Gardens Limited	57	The Section 32 analysis supporting PPC2 acknowledges that it is unlikely that commercial vegetable growing would fall to be considered as a controlled activity. This leaves no clear achievable pathway for vegetable growers which will move Woodhaven towards dairy farming and result in 250 jobs lost, loss of \$110k+ of support to community organisations, loss of \$30 million plus to the Levin township, loss of \$8 million in redundant infrastructure. Woodhaven requests new provisions be added to ensure Commercial Vegetable growers can replace lost production due to Nitrogen Loss restrictions and that they be entitled to consent for Land Use Change on land in less sensitive receiving areas to avoid job losses, protect individual enterprises economic viability and avoid loss of reasonable priced, healthy food production.
Federated Farmers NZ	58	Table 14.2 is creating significant issues. The feedback from its membership is that this is creating real economic and social hardship for its affected members. Issues for members include not being able to sell their farms, not being able to plan, and not being able to obtain funding from their banks to be able to change their activities, invest in technology or implement mitigations. The uncertainty regarding their future is causing significant stress and social cost. FFNZ also has serious concerns about the inadequacy of the section 32 assessment and the insufficient assessment of the costs, risks and benefits of the proposal to amend Table 14.2, and the consequential effect of the resulting consent regime in PC2. FFNZ is concerned that providing the NMP, which is essentially the action plan of how Overseer numbers will be maintained or achieved, on an annual basis will likely impose cost on farmers for no material benefit. FFNZ is concerned about the unreasonable costs to farmers of applying for a discretionary activity consent, particularly if consent application is notified. FFNZ is also concerned about the significant uncertainty for farmers of a discretionary activity consent application, in terms of the interpretation of the One Plan policies and the mitigations required in order for consent to be granted (and the associated economic and social costs). The effects of these costs and uncertainty cannot be underestimated. The feedback from its members is that the current inability to obtain consent as a controlled activity is resulting in significant stress and hardship. This includes an unwillingness by banks to lend funds necessary to carry out mitigations and an inability to sell farms. FFNZ considers that the amendments it proposes more appropriately balance the environmental, social and economic costs and benefits.

Submitter	Sub No.	Issue Raised
		In principle, FFNZ supports the adoption of a best practicable option ("BPO") to minimise the diffuse discharge of contaminants. However, FFNZ is concerned to ensure that the assessment is appropriately robust and takes into account practicalities and financial costs. FFNZ considers that it is important to consider the cost and practicality of technologies. This is consistent with the definition of BPO in the RMA and acknowledges that some innovations may be extremely expensive, the outcomes uncertain or untested or unsuitable for the particular location.
Tararua Growers Association	60	The One Plan Section 32a assessment did not assess the impact of the intensive farming rule on commercial vegetable growing. Across the area that the Tararua Vegetable Growers Association represents, outdoor vegetable growing contributes approximately \$100 million in GDP and 800 jobs. Specific to the Horowhenua District economy, outdoor vegetable growing contributes approximately \$50 million in GDP and 500 jobs. The proposed Plan Change 2 puts the vegetables growing businesses that make this contribution at risk. A loss of jobs within the Horowhenua District, which has an unemployment rate of 8.4%, (over double the national average of 4%), would cause poverty and hardship for local people.
Director General of Conservation	61	Amend policy 5-8(a)(iia) to provide direction on what degree of good management practice is necessary, and what level of nitrogen reduction is acceptable, and how costs are balanced with environmental outcomes.
Muaūpoko Tribal Authority	62	PC2 limits the development of Māori land within the Lake Horowhenua catchment.
Horticulture New Zealand	66	The Section 32 analysis, has not adequately accounted for the value of domestic food supply and in doing so a viable pathway to consent commercial vegetable growing activity remains unavailable.
Neil Filer	69	Is concerned with the cost and practicality of the proposal, including the cost of obtaining consent, the cost of a NMP, the cost of any assessment of environmental effects required, the potential cost if the consent application is notified, the cost of mitigation activities for reduction of nitrogen and other nutrients and the effect that meeting the Table 14.2 Cumulative Nitrogen Leaching Maximums (CNLMs) will have on his business and on his family's and his community's economic and social wellbeing.
Balance Agri-Nutrients	72	The Section 32 report notes that economic modelling of various farm systems has indicated that they would remain financially viable (were proposed changes to Table 14.2 implemented), although some may struggle to service high levels of debt or continue to run down nitrogen reserves in accordance with Table 14.2
Vincent John Payne	73	Objects to the purpose of plan change 2. Overseer is not fit for purpose. There is no direct lineal correlation between nutrients in waterways and algal growth or any other adverse indicators. No adequate economic impact has been researched.
Potatoes New Zealand	75	PC2 has the potential to significantly impair commercial vegetable production and presents obstacles to the ability of growers to operate and fails to provide certainty in relation to future growth needs.
Tararua District Council	79	There are no transitional arrangements or processes that will allow farmers to successfully adapt without business failure. This will have a direct flow through detrimental effect on the Tararua, regional and national economy. This is already

Submitter	Sub No.	Issue Raised
		having an immediate effect with bank support of farmers now in question. A successful transition will require equity investment and funding. This will be impacted by the cost of compliance and exacerbated by delays in decisions and court challenges. The cost of consenting is currently documented in our report between \$10,000-\$40,000 per farm and may rise as a result of PC2. It is noted that a publicly notified consent may incur great cost with no certainty of achieving a viable consent. A limited notification process may significantly reduce the cost and uncertainty, so we request that this be considered. Support a lower cost pathway to obtain a consent and removing costly assessments such as the AEE
Manawātū District Council	87	Consent may be difficult and costly to obtain under the One Plan rules, and as amended by Proposed Plan Change 2.
Manawātū District Council	FS-7	MDC concerned that the decision sought by Wellington Fish and Game to make intensive farming use not compliant with rule 14.2(c) a non-complying activity would add significantly to the cost and complexity of applications for farmers applying for consent for existing (and new) intensive farming land uses which is inconsistent with the intent of PC2.

14.1 Issues Raised

2. The above listed submissions raise concerns about the cost involved with regulation of IFLU activities, the cost of the consent process, and uncertainties associated with consenting outcomes. The following common themes feature in the submissions:
 - (a) PC2 will increase production costs for commercial vegetable growers and risks driving land use change away from CVG with adverse impact at district and regional scale;
 - (b) The cost of consenting under PC2 is uncertain or will be unreasonably high and consents may be difficult to obtain;
 - (c) The cost of compliance, including the mitigation measures required by PC2 to achieve the CNLM limits of Table 14.2, will be unreasonable and will force IFLU activities out of business;
 - (d) The lack of specificity around the meaning of 'good management practice' creates uncertainty;
 - (e) There are no transitional arrangements to allow farmers to successfully adapt without business failure;
 - (f) The consenting and compliance costs of PC2 are not justified by the anticipated water quality improvement.

14.2 Discussion: (a) Increased Production Costs for CVG

3. I do not agree that PC2 will cause increased production costs for existing CVG. The operative One Plan already requires the regulation of existing CVG. The relevant baseline for consideration is the operative One Plan⁶³ with the assumption of enforcement. Irrespective of PC2, existing IFLU activities have incurred or would have incurred costs associated with the operative One Plan framework of regulation.
4. Some of the costs and uncertainties presently associated with the operative IFLU regulatory framework are caused by the current policies pulling away from each other – that is, on one hand, the rules anticipate farmers and growers applying for a restricted discretionary activity consent to exceed the Table 14.2 CNLM limits (Rule 14-2) but on the other hand, the policies direct that existing IFLU activities must not exceed the Table 14.2 limits (in particular, Policy 14-5 (d)).
5. PC2 amends the policy framework to resolve that conflict and provides a discretionary activity pathway for existing IFLU. On an objective basis, PC2 therefore removes a degree of uncertainty and reduces the potential costs associated with the inability to obtain consent under the operative One Plan regulatory framework.
6. As discussed in Chapter 12 of this report, I have accepted the point made in the submissions of CVG growers and sector representatives that the PC2 discretionary activity provision is not a sufficiently certain consent pathway when considering some of the specific characteristics of existing CVG. I have, therefore, recommended an alternative controlled activity consent pathway which, in my opinion, will significantly increase certainty for existing CVG consent applicants. That pathway will require CVG changes to growing systems (just as the operative regulatory framework would), but without the need to comply with the Table 14.2 CNLM. There will be cost associated with implementing those changes. However, I am of the view that those costs are inherent in the operative restricted discretionary activity consent pathway already (there is just uncertainty created by the policy uncertainties).
7. Dr Jolly's section 42A technical report concludes that many typical CVG rotations are capable of meeting the requirements of the recommended alternative controlled activity rule, provided a mix of achievable GMP and BMP are implemented. I recommend a three-year phase-in period. I am of the opinion that this alternative is achievable and reasonable, compared to PC2 and to the operative One Plan framework. The cost of a controlled activity application will be less than for a restricted discretionary activity (the consent pathway under PC2 for non-compliance with Table 14.2). The alternative controlled activity rule I recommend will also provide slightly more certainty in terms of the expected reduction in N leaching from CVG (and therefore slightly more certainty of environmental outcome). However, overall, I have

⁶³ 29 July 2020 Joint Witness Statement of RMA Planning Experts: answer to Question 2.

reached the view that both options will have similar outcomes in terms of N load modelling⁶⁴ with the predicted water quality outcomes for both are not as good as for strict adherence to the Table 14.2 CNLM limits.

8. The relevant question when assessing the merits of PC2, is not whether regulation of CVG is appropriate or whether the costs of regulating CVG are warranted. Those questions were answered by the Courts in confirming the operative One Plan framework. PC2 does not alter the fundamental One Plan approach (of regulating CVG) or provide an opportunity to re-litigate those questions. The relevant question is what difference PC2 makes, compared to the operative One Plan requirements. My answer is that, on an objective basis and as demonstrated by the section 42A reports of Mr McNally, Dr Jolly and Mr Peter Clough, that PC2 improves certainty and the cost of regulation for CVG. As I set out above, I am of the view that the proposed alternative controlled activity pathway would further improve certainty and regulatory cost.

14.3 Discussion: (b) The PC2 Cost of Consenting is Uncertain or Unreasonably High

9. As I have highlighted earlier, I agree that there are uncertainties inherent in the discretionary activity consent pathway proposed by PC2. For the reasons discussed in Chapters 11 and 12, I recommend amendments to provide alternative controlled activity consent pathways tailored for CVG and dairy IFLU activities. These additional pathways will reduce consenting uncertainty and consenting cost. All consent applications must be accompanied by an assessment of effects on the environment, addressing the matters prescribed in Schedule 4 of the RMA and the matters prescribed in the One Plan. This is not a new requirement, or a cost introduced by PC2. This requirement is established by both the operative One Plan and the RMA.
10. Based on information supplied by Horizons, I estimate the current broad order of cost of applications for controlled activity, restricted discretionary and discretionary activity consents is in the order of (approximately):

Activity Status	Applicant Costs (including farm systems modelling, NMP and assembly of application)	Horizons Costs	Approximate Total
Controlled Activity	\$5,000 to \$10,000	\$2,000	\$7,000 to \$12,000
Restricted Discretionary Activity	\$10,000 to \$15,000 (assumes a more comprehensive	\$5,000 to \$10,000	\$15,000 to \$25,000

⁶⁴ This is confirmed in the report *Scenario Modelling of Nitrogen Management in Manawātū-Whanganui Region (Supporting Plan Change 2)* Land, Water People (September 2020) Table 3: Particularly, the comparison of scenarios 'Proposed Year-20 Pathway GMP + point sources' with 'proposed consented' (representing PC2). The mean relative difference for each is 40.

	assessment of One Policies and of groundwater and surface water quality effects is required)		
Discretionary Activity	Over \$15,000 (and potential over \$50,000 depending on the scale of effects and the need for specialist assessment including cultural impact assessment)	\$10,000 to \$20,000 (depending on the need for specialist review, including specialist surface water or groundwater quality advice)	

11. The above estimates do not include the costs of GMP or BMP improvements or the costs associated with responding to section 88 responses or section 92 requests, where the information is incomplete or insufficient for the purposes of determining the application. They are my estimates, based on available information and my own experience of compiling applications for consent. They should not be relied on or used to limit the actual costs that an applicant or Horizons may encounter in future. They are based on 2020 estimates for costs of services. I do not consider those broad order costs to be significant or unreasonable in the context of the likely size of the businesses and the benefits derived from securing the necessary consents. What my estimates demonstrate is the, expected and obvious, point that the controlled activity consent pathway is likely to be a substantially less expensive process than a discretionary activity consent pathway. It would not matter what the precise estimates are – that relativity will likely hold true.
12. Horizons charges its staff time at rates between \$55 per hour and \$120 per hour (excluding GST) for planners processing applications and between \$100 and \$170 per hour (excluding GST) for in-house specialist and science advisers. Hourly rates would be greater where external specialist advice is required. These rates are not out of kilter with typical local authority staff charging rates.

14.4 Discussion: (c) and (d) Cost of Compliance and Uncertainty of Requirements

13. The section 42A reports of Dr Jolly, Mr McNally and Mr Clough confirm that the range of costs for implementing the GMPs and BMPs necessary to achieve consent will be less under PC2 than under the operative One Plan framework. That is simply because PC2 does not require compliance with Table 14.2 in all cases. My recommended alternative controlled activity consent pathways will be less costly than under the operative One Plan, for the same reason.
14. In addition, the alternative consent pathways I have recommended set out more clearly what is expected of applicants (and the environmental outcome expected to result). In

my opinion this will enhance certainty for applicants and ensure consistency within farming and growing sectors.

15. I discuss the particular issues arising for IFLU activities involving land irrigation of treated municipal (and other) wastewater in Chapter 13 of this report. To the extent that PC2 resolves the internal policy conflict within Chapter 14 and provides a discretionary activity consent pathway for existing IFLU activities, it does not increase costs (has neutral effect) for consent applications involving treated wastewater. While I acknowledge this does not address the joint Councils' concerns in respect of new IFLU activities, PC2 does not introduce these costs or uncertainties for wastewater infrastructure proposals involving IFLU. They exist already in the operative One Plan.

14.5 Discussion: (e) Transitional Arrangements

16. The claim that there are no transitional arrangements available for IFLU farmers and growers to give effect to on-farm land use changes is, in my view, simply incorrect.
17. Policy 14-5 (d) and 14-6 (d) and (f) explicitly provide for the continuation of IFLU activities for a limited period to allow transition to a different land use. These provisions are absent from the operative One Plan. PC2 proposes them.

14.6 Discussion: (f) The Costs of Consenting Are Not Justified

18. The evidence of Abby Matthews and Dr Snelder demonstrate that the water quality improvements associated with regulating IFLU activities are difficult to isolate, slight at best, and may make no net difference in some water management sub-zones. However, this projection is not new. It was what was anticipated by the One Plan. As discussed above, the relevant question when considering the purpose of PC2 is not whether regulation of IFLU activity is warranted, given the predicted water quality outcome. The relevant question is what difference PC2 will make, compared with the operative One Plan and the challenges within the current policies and rules.
19. PC2 will (overall) decrease the cost and uncertainty of the consent process but will also reduce or defer (somewhat) the anticipated water quality outcomes. That is because PC2 shifts away from unintended strict adherence to the Table 14.2 limits. My conclusion is that these shifts will be marginal in the regional context. Most (but not all) RMA Planning experts agree that the benefits of continuing with PC2 are sufficient to continue with the plan change. PC2 will achieve N leaching loss reduction with associated water quality improvement (although marginal in the context of region-wide water quality degradation). The need to address diffuse N leaching from IFLU activities is longstanding and arguably more urgent than what was originally the case. The absence of an effective regulatory framework creates inequities between consented and unconsented IFLU activities within the region, and fails to address the water quality strategies in the One Plan.

20. In my opinion these are sound reasons in support of PC2. The costs of consenting and costs of compliance (GMPs and BMPs) should be no surprise to unconsented IFLU activities and have been a cost of doing business as an IFLU since at least 2014.

14.7 Recommendations

21. For the reasons explained in the foregoing paragraphs, I recommend that the aspects of the following submissions that raise issues with the cost of consenting, the uncertainty of consenting, or the cost of compliance under PC2 be **accepted in part** to the extent that PC2 provisions are confirmed but amended to provide for alternative controlled activity consent pathways:

- (a) Parts of the submissions of Griffins Foods Ltd (S1), Lisa Charmley (S3), BakerAg Ltd (S5), Horowhenua District Council (S42), Ohakune Growers Association (S43), Arawhata Wetland Alliance Group (S46), Ian Grant and Anne Cumming (S47), Sarah von Dadelszen (S48), Geoff and Cynthia Kane (S49), Russell and Karen Phillips (S52), Andrew Day (S53), Woodhaven Gardens Ltd (S57), Federated Farmers NZ (S58), Tararua Growers Association (S60), Director General of Conservation (S61), Muaūpoko Tribal Authority (S62), Horticulture NZ (S66), Neil Filer (S69), Ballance Agri-Nutrients Ltd (S72), Vincent Payne (S73), Potatoes NZ (S75), Tararua District Council (S79), Manawatū District Council (S87), submissions S6 to S39 and the further submission of Manawatū District Council (FS7).

15 The Utility of Overseer and Accommodating Future Version Upgrades

15.1 Issues Raised and Relief Requested

1. This chapter considers the submission points that raise concerns about the use of Overseer in PC2. The submission points relating to this issue fall into the following themes:
 - (a) Overseer is not fit for purpose for modelling the N leaching from horticultural systems;
 - (b) Overseer was not developed for the purpose used in the One Plan and the science is not good enough for farmers to rely on for compliance;
 - (c) Overseer is not suitable for modelling the impact of land irrigation of treated municipal wastewater (or any treated industrial wastewater);
 - (d) Overseer is not the only model available that can be used to model nutrient leaching from farming and growing systems.
 - (e) Future Overseer version upgrades will create uncertainty about compliance and the ability to demonstrate compliance with Table 14.2, particularly as historic versions of Overseer are not accessible once replaced by version upgrades (and some suggest that reference to the Overseer version used for calculation of the Table 14.2 CNLMs should be included in PC2, along with the methodology for calculating the Table 14.2 limits, to allow future Overseer modelling to maintain comparability with Table 14.2);
 - (f) Incorporating future Overseer version upgrades by a series of plan changes is not efficient or effective and reference to future versions of Overseer is ultra vires;
2. The following table details the individual submission points that raised these issues:

Submitter	Sub No.	Summary of Issues Raised	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
Ruapehu District Council	2.1	Submitter recommends an investigation into the use of Overseer as a viable option for the future. Any algorithm is not visible to Council and therefore provides no certainty.	Horowhenua District Council (FS19.2.1) Forest and Bird (FS1.2.1)	

Submitter	Sub No.	Summary of Issues Raised	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
Lisa Charmley	3.3	No relief requested: notes ongoing uncertainty over how farming will be affected by future Overseer version changes.		
BakerAg	5.4	No relief requested: Concerned at heavy reliance on the modelling of nutrient loss. Needs to be backed up by more real-world monitoring. Concerned about future Overseer version changes having dramatic changes in outcomes. Will the requirements in Table 14.2 be updated when new versions of Overseer are rolled out? Will there be any consultation on changes before they are applied?		
DairyNZ Limited	40.3	Monitoring version changes and responding by way of plan change(s) if necessary is not an appropriate solution and contrary to all advice on the use of Overseer in regulation.	Horticulture NZ (FS4.40.3)	Forest and Bird (FS1.40.3) Horowhenua District Council (FS29.40.3)
	40.7	Overseer is not the only model that can be used.	Water Protection Society (FS2.40.7)	Forest and Bird (FS1.40.7) Horowhenua DC (FS29.40.7)
Freshpik Farms Ltd	41.1	Concerns about the ability of Overseer to accurately and reliably assess nutrient discharges from horticultural systems due to deficiencies in the model for horticulture crops. Would support a performance-based method for tallying nutrient losses related to horticultural management practices.		
Horowhenua DC	42.2	Overseer is not well developed for modelling the effects of municipal wastewater applications. Horizons should give consideration to an alternative assessment approach to Overseer	Manawatū DC (FS7.42.2) Potatoes NZ (FS12.42.2)	Forest & Bird (FS1.42.2) Water Protection Society (FS2.42.2)

Submitter	Sub No.	Summary of Issues Raised	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		modelling for municipal wastewater schemes, such as an effects-based assessment.		Federated Farmers NZ (FS11.42.2)
Ian Corbetts	44.1	Concerned about the ability to accurately and reliably assess nutrient discharges from horticultural systems. Supports a performance-based method for tallying nutrient losses from horticultural management practices.		Water Protection Society (FS2.44.1)
Ravensdown Limited	45.5	Overseer will continue to be updated and refined in the future. PC2 may already be out of date (Overseer version 6.3.2 has already superseded the version 6.3.1 on which Table 14.2 is based. The newest version of Overseer is associated with cloud-based Overseer FM which is expected to be updated more regularly.		Forest and Bird (FS1.45.5) Federated Farmers of New Zealand (FS11.45.5)
Sarah von Dadelszen	48.3	Overseer was not developed for this purpose and the science is not good enough for farmers to rely on for compliance.		
	48.6	There could be other science information and measurements that make Overseer obsolete.		
Russell and Karen Phillips	52.3	Concerned about ongoing uncertainty about how farm will be impacted by future Overseer version changes.		
Federated Farmers NZ	58.1	Changing the numbers in Table 14.2 will only assist farmers for as long as there are no significant Overseer version changes. Repeated plan changes to incorporate Overseer version changes is not an effective or efficient regulatory response to the inevitable issues that will arise as Table 14.2 becomes out of date repeatedly. A methodology should be included in PC2 for the calculation of Table 14.2 limits. It is also important to recognise		

Submitter	Sub No.	Summary of Issues Raised	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		the limitations of Overseer for certain farm systems. Also considers the issues could be addressed if Overseer were used on a five-year rolling basis (providing for overs and unders), recognising that Overseer is an averaged equilibrium model.		
Horticulture NZ	66	PC2 does not acknowledge the fundamental inefficiencies and ineffectiveness of Overseer as a tool for calculating N budgets for commercial vegetable growing. Concerned about the ability of Overseer to accurately assess nutrient discharges from horticultural systems. Overseer is not a reliably on-farm decision support tool for growers.		
Ngāti Turanga	67.7	Reference to future versions of Overseer is ultra vires.	Forest & Bird (FS1.67.7, FS1.68.7, FS1.70.7) Water Protection Society (FS2.67.7, FS2.68.7, FS2.70.7)	Federated Farmers NZ (FS11.67.7, FS11.68.7, FS11.70.7)
Te Roopū Taiao o Ngāti Whakatere Trust	68.7			
Te Rūnanga o Raukawa	70.7			
Neil Filer	69.1	Concerned about uncertainty of how farm will be impacted by future Overseer version changes.		
Vincent John Payne	73	PC2 needs to remove its application of Overseer because it is a modelling tool only and is as variable as the environment it intends to modify.		
Potatoes NZ	75.14	Concerned about the ability to accurately and reliably assess nutrient discharges from horticultural systems. Supports a performance-based method for accounting for nutrient losses.		
Parlato Farming Company	78.1	Concerned about the ability to accurately and reliably assess nutrient discharges from		Water Protection

Submitter	Sub No.	Summary of Issues Raised	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		horticultural systems. Supports a performance-based method for accounting for nutrient losses.		Society (FS2.78.1)
Tararua District Council	79.2	Overseer model needs to sit outside the One Plan as it may be replaced or improved over time. Modifications should be permitted in consultation with those affected but on a less onerous basis.		
Combined Councils	82.2	Questions the appropriateness of applying Overseer and Table 14.2 limits to treated municipal wastewater discharges to land.	Fonterra (FS13.82.2) Horowhenua DC (FS18.82.2)	Water Protection Society (FS2.82.2)
Palmerston North CC	83.1	Questions the appropriateness of applying Overseer and Table 14.2 limits to treated municipal wastewater discharges to land.	Manawatū DC (FS7.83.1) Fonterra (FS13.83.1)	Water Protection Society (FS2.83.1) Federated Farmers NZ (FS11.83.1)

15.2 Discussion: Issues (a), (b) and (c) The Utility of Overseer

3. The appropriateness and utility of Overseer for estimating N leaching from farm systems (including CVG systems) were questions discussed in detail by the Farm Systems Modelling experts at conferencing. Their agreed conclusions are set out in answers to the questions they addressed in conferencing, which are recorded on pages 16 to 23 of the Joint Witness Statement dated 21 and 22 July 2020. The relevant agreed conclusions are:

Can N loss from commercial vegetable growing and arable intensive farming land use activities be represented within and modelled by Overseer FM?

There are issues for vegetables, arable and forage crops for modelling and is therefore unreliable for depending on its use in terms of absolute numbers, but it does provide a view on trend within the same system. Yes it can be but it has not been calibrated or validated against very many vegetables and arable crops, for all soil types and in all climate zones. Similarly the statement above would apply to pasture types e.g. plantain and chicory.

What are the current difficulties in modelling on-farm nutrient losses from commercial vegetable growing, using Overseer FM?

There is a lack of empirical data, particularly for vegetable growing but [this] also applies to other intensive land uses. The difficulty arises when modelling is trying to achieve an absolute number.

How can the identified difficulties be overcome? *Consistency can be achieved with the certification process, agreed industry standards for 'work-arounds' provided for use. Sector based work-arounds which provide consultants and industry groups consistency and certainty e.g. Dairy-based one-pager. ... The work-arounds are standardising practice and reducing the variations associated with input data.*

4. Associate Professor Horne's opinion is straightforward⁶⁵: Overseer is not only fit for purpose, it is the most practicable tool to use to assess nutrient losses from agricultural systems in the region and help farmers achieve a consent. Dr Jolly's conclusion⁶⁶ is similar for CVG: when applied appropriately, Overseer is a suitable for the purpose used in the One Plan (and in PC2). Both Dr Jolly⁶⁷ and Associate Professor Horne acknowledge the limitations of Overseer for some farm system elements (and particularly for some crops) but both agree (as do the other experts) that a model is necessary and that Overseer is an appropriate modelling tool. Dr Jolly recommends that the development of a user guide for CVG in the Horizons region should be considered. I agree that would be useful and it could be considered as part of an implementation plan for PC2.
5. The Farm Systems Modelling experts addressed the question of whether and how Overseer can be used to model N leaching loss from IFLU activities associated with land irrigation of treated wastewater. They concluded that effluent applied to a dry stock farm will trigger the One Plan provisions for IFLU activities and that N leaching losses are likely to exceed the Table 14.2 limits. They did not raise any issues with the ability of Overseer to model these N leaching losses.
6. There does not appear to be any dispute amongst the qualified experts that Overseer is appropriate for use in estimating N leaching loss for the purpose of the One Plan (and PC2) provisions. The RMA Planning experts agreed that⁶⁸ Overseer is an appropriate modelling tool for:
 - (a) Setting thresholds for activity status in a Plan; and
 - (b) Testing the efficacy of on-farm system changes to inform adaptive management (i.e. as a decision support tool).
7. These are the ways in which Overseer is used in (or to demonstrate compliance with) the One Plan and PC2 provisions for IFLU activities. The expert advice of Dr Jolly and Associate Professor Horne, supported by conferencing outcomes, therefore confirms

⁶⁵ Paragraphs 27 to 43 of Associate Professor David Horne's Section 42A Report *On-Farm Management Practices*

⁶⁶ Paragraphs 32 to 39 of Dr Anne-Maree Jolly's Section 42A Report *GMP and Overseer Modelling for Commercial Vegetable Growers*

⁶⁷ Paragraphs 35 to 39 of Dr Anne-Maree Jolly's Section 42A Report *GMP and Overseer Modelling for Commercial Vegetable Growers*

⁶⁸ In answer to Question 19 (page 17) 20 August 2020 RMA Planning Experts Joint Witness Statement

(a) and (b) above are appropriate uses of Overseer in the One Plan and that Overseer is fit for purpose in this regard.

15.3 Discussion: Issue (d) Alternatives to Overseer

8. The Farm Systems Modelling experts agreed⁶⁹ that there are other modelling tools available, that they all have their advantages and disadvantages and that Overseer is a suitable tool for the purposes used in the One Plan. Associate Professor Horne's advice⁷⁰ is that there are other models that can be used but that many of these are 'research grade' and only available to trained specialists. His conclusion is that these alternatives do not provide more certainty than, or more utility than, Overseer.
9. In any event, PC2 replaces the reference to Overseer in the definition of 'nutrient management plan' with 'a recognised nutrient management model'. The submitters may not have understood that PC2 actually does what they have asked (i.e. PC2 allows the use of alternatives to Overseer).

15.4 Discussion: Issues (e) and (f) Accommodating Overseer Version Upgrades

10. Associate Professor Horne agrees that a mechanism to manage the implications of Overseer version changes needs to be included in the One Plan framework⁷¹. Associate Professor Horne and Dr Jolly note that Overseer is continually upgraded and that this is beneficial. They acknowledge that this also means that CNLM based on a particular version of Overseer can become outdated over time. This is exactly part of the reason PC2 was necessary. I agree with submitters that having to update Table 14.2 to accommodate cumulative or significant Overseer upgrades is potentially inefficient. Associate Professor Horne recommends the use of a 'reference file' approach. The key elements of that approach are set out in paragraphs 49 to 57 of Associate Professor Horne's Section 42A Report *On-Farm Management Practices*.
11. Further work is required before a suitable reference file methodology is finalised for inclusion in PC2. This work will be undertaken in the period leading up to the hearing, with a view to providing a clear recommendation to the Panel on a recommended reference file methodology. I undertake to circulate a draft methodology for consideration by relevant submitters and the Panel as soon as reasonably practicable.

⁶⁹ Pages 18 and 19 of the *Farming and Growing Management Practices; Farm Systems Modelling and Farm-Scale Economics* 20 & 21 July 2020 Joint Witness Statement

⁷⁰ Paragraph 40 of Associate Professor David Horne's Section 42A Report *On-Farm Management Practices*

⁷¹ Paragraph 49 of Associate Professor David Horne's Section 42A Report *On-Farm Management Practices*

12. For the purposes of this Section 42A Report, I accept the submission points that request inclusion of:
- (a) Reference in, or as a footnote to, Table 14.2 clarifying that the CNLM values were calculated based on Overseer version 6.2.3 (and additional text may be required, depending on the wording of the reference file methodology); and
 - (b) Subject to further analysis, a methodology for accommodating future Overseer version changes in a new schedule to the One Plan.
13. I do not agree with submissions raising *vires* issues. It is my opinion that an approach accommodating future Overseer version upgrades in the manner described by Associate Professor Horne can be prepared in a manner which is not *ultra vires*.

15.5 Recommendations

14. For the reasons explained in the foregoing paragraphs I recommend that:
- (a) PC2 be amended by inserting into the preamble to Table 14.2 clarification that the CNLM values were derived using Overseer version 6.2.3 as follows:

Table 14.2 sets out the *cumulative nitrogen leaching maximum** for the *land^* used for intensive farming *land^* use activities within each specified *land use capability class**. The *cumulative nitrogen leaching maximum** values in Table 14.2 were derived using Overseer 6.2.3.
 - (b) PC2 be amended by including a ‘reference file’ methodology for accommodating future Overseer version changes in a new schedule to the One Plan (and this will be circulated for consideration as soon as practicable); and
 - (c) The submission points of Ruapehu DC (S2.1), Lisa Charmley (S3.3), Dairy NZ (S40.3, S40.7), Freshpik Farms Ltd (S41.1), Ian Corbetts (S44.1), Ravensdown Limited (S45.5), Sarah von Dadelszen (S48.6), Russell and Karen Phillips (S52.3), Federated Farmers NZ (S58.1), Horticulture NZ (S66), Neil Filer (S69.1), Potatoes NZ (S75.14), Parlato Farming Company (S78.1) and Tararua DC (S79.2) be **accepted in part** by amending PC2 in the manner described in (a) above; and
 - i. The further submission points in support of the submission points listed in (c) above be **accepted in part**; and
 - ii. The further submission points that oppose the submission points listed in (c) above be **rejected**; and

- (d) The submission points of Horowhenua DC (S42.2), Sarah von Dadelszen (S48.3), Ngāti Turanga (S67.7), Te Roopū Taiao o Ngāti Whakātere (S68.7), Te Rūnanga o Raukawa (S70.7), Vincent Payne (S73), the Combined Councils (S82.2) and Palmerston North City Council (S83.1) be **rejected**; and
- i. The further submission points that support the submission points listed in (d) above be **rejected**; and
 - ii. The further submission points that oppose the submission points listed in (d) above be **accepted**; and
- (e) That the Panel note that no decision is required in respect of submission point S5.4 (which requested no relief).

16 Good Management Practice

- This chapter addresses the submission points received on the topic of 'good management practice' (**GMP**). The relevant submission points are summarised in the following table:

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
Griffins Food Ltd	1.1	Supports requiring all growers to operate at a good management practice.		
Kahungunu ki Tāmaki nui-a-Rua Trust	4.6	Where BPOs and GMPs are promoted, include taking into account nutrient losses from farm drainage systems (tile, NovaFlow ² (or similar) and farm drains) and managing these as 'point source' discharges.	Forest and Bird (FS1.4.6) Water Protection Society (FS2.4.6)	Federated Farmers of New Zealand (FS11.4.6)
BakerAg NZ Limited	5.6	The expression GMP is vague and needs objective measures to describe what this mean in practice. It should also be introduced in a reasonable timeframe that encourages and allows for compliance. How will Horizons encourage GMP - where is the encouragement/positive incentives?		Forest and Bird (FS1.5.6)
Proforma Commercial Vegetable Growers	6.1 to 39.1	Support requiring all growers to operate at good management practice.		
DairyNZ Limited	40.1	Amend Policy 5-8(iia) and (A) <u>(iia) Existing intensive land activities which do not comply with (ii) must be regulated to reduce nitrogen leaching which is in excess of the nitrogen leaching maximums established under (a) by implementing good</u>	Horticulture NZ (FS4.40.1) Beef + Lamb New Zealand (FS14.40.1) First-round submissions of: Lisa & Paul Charmley (S3.1) Ian Grant and Shirley Cumming (S47.1)	Forest and Bird (FS1.40.1) Horowhenua District Council (FS29.40.1)

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		<u>farming management practices*, and additional mitigation measures to minimise the degree of non-compliance, having regard to:...</u>	Sarah von Dadelszen (S48.1) Russell & Karen Phillips (S52.1)	
Dairy Limited NZ	40.4	Amend Policy 14-3 as proposed in PPC2 to refer to <u>good farming practice</u> rather than good management practice.	First-round submissions of: Lisa & Paul Charmley (S3.4) Ian Grant and Shirley Cumming (S47.4) Sarah von Dadelszen (S48.4) Russell & Karen Phillips (S52.4)	Forest and Bird (FS1.40.1) Horowhenua District Council (FS29.40.1)
Dairy Limited NZ	40.6	Amend Policy 14-6(d) and (d)(i): <u>(d) Provide for exceptions to (a) ... where:</u> <u>(i) Good management farming practices* are implemented in accordance with a nutrient management plan*, along with additional innovations and mitigation measures to further reduce nutrient leaching and run-off, faecal contamination and sediment losses from the land^ progressively over time; or ...</u>	Horticulture NZ (FS4.40.6) Beef + Lamb New Zealand (FS14.40.6) First-round submissions of: Lisa & Paul Charmley (S3.6) Ian Grant and Shirley Cumming (S47.6) Sarah von Dadelszen (S48.6)	Forest and Bird (FS1.40.6) Horticulture NZ (FS4.40.6) Horowhenua District Council (FS29.40.6)
DairyNZ Limited	40.8 40.9	Amend 'good management practice' to ' <u>good farming practice</u> ' in: Rule 14-1, Rule 14-2.	Horticulture NZ FS4.40.8, FS4.40.9 First-round submissions of: Lisa & Paul Charmley (S3.7, S3.8) Ian Grant and Shirley Cumming (S47.7, S47.8) Sarah von Dadelszen (S48.7, S48.8)	Forest & Bird FS1.40.8, FS1.40.9 DOC FS3.40.8, FS3.40.9 EDS FS5.40.8, FS5.40.9 Beef & Lamb NZ FS14.40.8, FS14.40.9 Horowhenua DC FS29.40.8, FS29.40.9

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
			Russell & Karen Phillips (S52.7, S52.8)	
DairyNZ Limited	40.11	Amend definition as notified to: “ <u>Good management farming practices refers to evolving practical measures and methods, including those established in industry based standards, which are used at a sector—or community farm level to minimise effects of discharges to land[^] and water[^].</u> ”	Horticulture NZ (FS4.40.11) First-round submissions of: Lisa & Paul Charmley (S3.10,) Ian Grant and Shirley Cumming (S47.10)	Forest and Bird (FS1.40.11) Horowhenua District Council (FS29.40.11)
Mike Moleta (Freshpik Farms)	41.2	Support requiring all growers to operate at good management practice.		
Ohakune Growers Association	43.2	Support requiring all growers to operate at good management practice.	Horticulture NZ (FS4.43.2)	
Ian Corbetts	44.2	Support requiring all growers to operate at good management practice.		Water Protection Society (FS2.44.2)
Ravensdown Limited	45.13	Amend the definition of ‘good management practices’ as follows: “ <u>refers to evolving practical measures and methods, including those established in industry-based guidance documents standards, which are used at a sector or community level to minimise the effects of discharges to land[^] and water[^].</u> ”		Forest and Bird (FS1.45.13) Federated Farmers of New Zealand (FS11.45.13)
Andrew Day	53.2	Supports good management practices within the values stated in Table 14.2 but oppose these same practices when used to justify intensity of	Water Protection Society (FS2.53.2)	

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		environmental impact beyond these levels.		
Environmental Defence Society Incorporated	54.3	Policy 14-3: Reinstate pre-PC2 wording with the inclusion of the underlined words: <u>"The Regional Council will examine on an ongoing basis relevant industry based standards including good management practices."</u>	Forest and Bird (FS1.54.3) Water Protection Society (FS2.54.3)	Federated Farmers of New Zealand (FS11.54.3)
	54.6	Amend Rule 14-2 sub-clause (b) in Matters of Discretion to pre-PPC2 to read "... <u>measures, including good management practices...</u> "	Forest and Bird (FS1.54.7) Water Protection Society (FS2.54.7) Director-General of Conservation (FS3.54.7)	Federated Farmers of New Zealand (FS11.54.7)
Wellington Fish & Game Council	55.4	Policy 14-3: Reinstate pre-PC2 wording with the inclusion of the underlined words: <u>"The Regional Council will examine on an ongoing basis relevant industry based standards including good management practices."</u>	Forest and Bird (FS1.55.4) Water Protection Society (FS2.55.4)	Federated Farmers of New Zealand (FS11.55.4) Dairy NZ (FS9.55.4)
Federated Farmers of New Zealand	58.5	Retain Policy 14-3 as drafted. In the alternative, adopt a definition based on good farming practice that is consistent with the 2018 Good Farming Practice Action Plan (with necessary modifications so that it applies to this region).		Forest and Bird (FS1.58.5) Horowhenua District Council (FS24.58.5)
	58.10	In addition to other requested changes, amend the provisions to ensure that the entire regime is appropriately flexible and tailored (e.g. tailoring GMP actions to the particular farm, providing for amendments to NMPs, a risk based approach to compliance etc), whilst at the same time being		Forest & Bird FS1.58.10 Horowhenua DC FS24.58.10

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		enforceable and achieving the desired water quality outcomes. FFNZ seeks any necessary amendments to Plan Change 2 to achieve this e.g. to the definition of GMP and NMP as set out in the submission.		
	58.19	Retain [definition of Good Management Practices] as drafted. In the alternative, use the word “<u>manage</u>” in the sentence “<u>minimise the effects of discharges to land and water</u>” instead of “minimise” and “reasonably practicable” as opposed to practical. In the alternative, reword the definition based on good farming practice principles, as tailored to the region and catchment.	Horticulture New Zealand (FS4.58.19)	Forest and Bird (FS1.58.19) Horowhenua District Council (FS24.58.19)
Tararua Growers Association	60.2	Support requiring all growers to operate at good management practice.	Horticulture NZ (FS4.60.2) Chris Pescini – Pescini Brothers Ltd (FS6.60.2) Woodhaven Gardens (FS8.60.2)	
Director-General of Conservation	61.2	Policy 5-8 (a) (iia): Amend to provide direction on what degree of good management practice is necessary, on what level of nitrogen reduction is acceptable, and how costs are balanced with environmental outcomes.	Forest and Bird (FS1.61.2) Water Protection Society (FS2.61.2) Public Health Services Mid-Central Health Board (FS15.61.2)	Federated Farmers of New Zealand (FS11.61.2)
	61.9	Amend the definition of ‘Good Management Practice’ to define more clearly what constitutes good management practice.	Forest and Bird (FS1.61.9) Water Protection Society (FS2.61.9) Public Health Services Mid-Central Health Board (FS15.61.9)	

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
	61.10	Include minimum requirements for what good management practice are required within nutrient management plans or a farm environment plan and what the anticipated environmental outcomes are.	Forest and Bird (FS1.61.10) Water Protection Society (FS2.61.10) Public Health Services Mid-Central Health Board (FS15.61.10)	
	61.12	Amend the provision to provide greater direction for plan users and decision makers on what level of good management practice is required and what circumstances may trigger a higher level of management, and what must be achieved by particular timeframes over which the management practices are required as conditions of consent.	Forest and Bird (FS1.61.12) Water Protection Society (FS2.61.12)	Federated Farmers of New Zealand (FS11.61.12)
Ngā Waihua o Paerangi Trust	63.31	Delete the definition of 'Good Management Practices'; Or Amend the definition of Good Management Practices to set out specific management practices or outcomes sought by management practices that will achieve measurable improvements in water quality and reduction in containment loss from the intensive farming activity.	Forest and Bird (FS1.63.31)	
Water Protection Society	65.22	WPS requests a clearer definition of good management practices to be given (in the glossary). WPS request that a more definitive definition of Good management practices be proposed. A non-exclusive list of all of the types of practices meant by 'good management practices' would also be helpful to	Forest and Bird (FS1.65.22)	Federated Farmers of New Zealand (FS11.65.22)

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		make the meaning clear. E.g: <u>"Good management practices include, but are not limited to..."</u>		
Ngāti Turanga Te Roopū Taiao o Ngāti Whakatere Trust Te Rūnanga o Raukawa	67.5, 68.5, 70.5	It is proposed that all the proposed changes to Policy 14-3 are rejected. It is proposed that the only change to the operative Policy is to insert the wording "good management practices" is inserted into Operative Policy 14-3 to read: <u>"The Regional Council will examine on an on-going basis relevant industry-based standards (including good management practices, guidelines and codes of practice..."</u> Note: Submitter provides tracked changes version of full Policy 14-3 in submission.	Forest and Bird (FS1.67.5, FS1.68.5, FS1.70.5) Water Protection Society (FS2.67.5, FS2.68.5, FS2.70.5)	Federated Farmers of New Zealand (FS11.67.5, FS11.68.5, FS11.70.5)
	67.7, 68.7, 70.7	In proposed Policy 14-6(e)(i) the wording <u>"proposed innovations and measures represent"</u> is undefined. It also unclear from the policy whether the BPO must be required for a proposal to be eligible for an exemption under (d)(i). In addition, in Policy 14-6(d)(i) it is unclear what constitutes <u>"additional innovations and measures"</u> or why they are required in addition to GMP to further	Forest and Bird (FS1.67.7, FS1.68.7, FS1.70.7) Water Protection Society (FS2.67.7, FS2.68.7, FS2.70.7)	Federated Farmers of New Zealand (FS11.67.7, FS11.68.7, FS11.70.7)

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		reduce nutrient leaching. This wording should be deleted. The proposed definition of GMP uses the term “<u>practical measures and methods</u>”. Further to this, amend Policy 14-6(f)(i) use of the word “<u>measures</u>” should be amended to “<u>good management practices</u>” ; as measures is not defined in this context.		
	67.13, 68.13, 70.13	Provide a new <u>Schedule K: Good Management Practices</u> to the Regional Plan is introduced which lists the ‘on-farm practical measures and methods’ which <u>can be considered to be GMP under Rules 14-1, 14-2 and 14-2A</u>; and Operative Policy 14-3 is amended to read: The Regional Council will examine on an on-going basis relevant industry-based standards (including <u>good management practices</u>* guidelines and codes of practice) recognising that such industry based standards generally represent current best practice, and may accept compliance with those standards as being adequate to avoid, remedy or mitigate adverse effects^ to the extent that those standards address the matters in Policies 14-1, 14-2, 14-4 and 14-5”.	Forest and Bird (FS1.67.13, FS1.68.13, FS1.70.13) Water Protection Society (FS2.67.13, FS2.68.13, FS2.70.13)	Federated Farmers of New Zealand (FS11.67.13, FS11.68.13, FS11.70.13)
Ballance Agri-Nutrients Limited	72.2	Policy 14-3: Support using consistent, industry accepted terminology. GMP		Forest and Bird (FS1.72.2)

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		is a recognised term, used around the country.		
	72.10	Amend the definition of good management practices to refer primarily to the <u>Industry Agreed Good Management Practices relating to Water quality (Matrix of Good Management, 2015)</u> .		Forest and Bird (FS1.72.10) Federated Farmers of New Zealand (FS11.72.10)
Beef + Lamb New Zealand	74.3 74.7	Amend Policy 5-8 (a)(i)(C) and 5-8 (d) by replacing the expression 'good management principles' with 'good farming practice principles'.		Forest and Bird (FS1.74.3, FS1.74.7) Federated Farmers of New Zealand (FS11.74.3, FS11.74.7) Horowhenua District Council (FS33.74.3, FS33.74.7)
	74.5	Amend Policy 5-8(a)(iia) (A) and (B) to read: <u>"Existing intensive land^ use activities which do not comply with (ii) must be regulated to reduce nitrogen leaching which is in excess of the nitrogen leaching maximums established under (a) by implementing good management practice good farming practice principles*, and additional measures to minimise the degree of non-compliance become compliant over time, having regard to: ...</u>		Forest and Bird (FS1.74.5) Horticulture NZ (FS4.74.5) Federated Farmers of New Zealand (FS11.74.5) Horowhenua District Council (FS33.74.5)
	74.9	Amend Policy 14-3 to delete reference to Good Management Practices' and replace with 'Good Farming Practice Principles'		Forest and Bird (FS1.74.9) Federated Farmers (FS11.74.9) Horowhenua District Council (FS33.74.9)

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
	74.10	Amend Policy 14-6(b) as follows: “(b) Ensure implementation of good management practices <u>good farming practice principles</u> * to manage nutrient leaching and run-off, faecal contamination and sediment loss,...		Forest and Bird (FS1.74.10) Federated Farmers of New Zealand (FS11.74.10) Horowhenua District Council (FS33.74.10)
	74.11 74.12	Amend Policy 14-6(b)(i) and (ii) replace the expression ‘good management practices’ with ‘good farming practice principles’		Forest and Bird (FS1.74.11, FS1.74.12) Federated Farmers of New Zealand (FS11.74.11, 11.74.12) Horowhenua District Council (FS33.74.11, FS33.74.12)
	74.15	Amend Rule 14-1 to delete reference to ‘Good Management Practices’ and replace with ‘Good Farming Practice Principles’		Forest and Bird (FS1.74.15) Federated Farmers of New Zealand (FS11.74.15) Horowhenua District Council (FS33.74.15)
	74.16	Amend Rule 14-2 to delete reference to ‘Good Management Practices’ and replace with ‘Good Farming Practice Principles’		Forest and Bird (FS1.74.16) Federated Farmers of New Zealand (FS11.74.16) Horowhenua District Council (FS33.74.16)
	74.17	Amend proposed new definition of good management practices to read: “ Good management practices <u>Good farming practice principles</u> refers to		Forest and Bird (FS1.74.17) Federated Farmers of New Zealand (FS11.74.17)

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
		<u>the agreed national good farming practice principles contained in the document Good Farming Practice Action Plan for Water Quality 2018</u> evolving practical measures and methods, including those established in industry-based standards, which are used at a sector or community level to minimise the effects of discharges to land[^] and water[^].		Horowhenua District Council (FS33.74.17)
Potatoes New Zealand	75.11	Amend definition of GMP to read: <u>“Good management practices refers to evolving practical measures and methods, including those established in industry-based standards, which are used at a sector or community level to measure, manage and minimise the effects of discharges to land[^] and water[^].”</u>	Horticulture New Zealand (FS4.75.11) Chris Pescini – Pescini Brothers Ltd (FS6.75.11) Woodhaven Gardens (FS8.75.11) Horowhenua District Council (FS27.75.11)	Forest and Bird (FS1.75.11) Horticulture New Zealand (FS4.75.11) Chris Pescini – Pescini Brothers Ltd (FS6.75.11) Woodhaven Gardens (FS8.75.11) Federated Farmers of New Zealand (FS11.75.11)
Manawātū District Council	87.3	Amend the definition of ‘good management practices’ as follows: “Good management practices refers to evolving practical measures and methods, including those established in industry-based standards, which are used at a sector or community level to minimise the effects of discharges to land and water.”		Horowhenua District Council (FS16.87.3)

16.1 Relief Requested and Issues Raised

- There is widespread support in the submissions for requiring IFLU activities to operate using GMP. There is also a concern by some submitters that GMP is poorly defined by PC2 and that GMP alone is insufficient to address nutrient run-off and leaching,

sediment loss and faecal contamination that are contributing to water quality degradation. For this reason, some submitters request a tighter definition of GMP and some request a list of GMPs in, either, the definition or a schedule to the One Plan. Some submissions have requested a change in nomenclature – preferring ‘good farming practice’ (S40) or ‘good farming practice principles’ (S74) to GMP.

3. Submission point S4.6 raises a particular issue that nutrient loss via sub-surface drains are a point source of contaminant and need to be regulated as point source discharges. Submission S40 requests amendment of ‘additional innovations’ to ‘additional mitigation measures’. Submission point S58.19 seeks amendment of the definition of GMP to ‘manage’ effects of discharges instead of ‘minimise’ effects. Submission point S75.11 requests insertion into the GMP definition of the requirement to ‘measure, manage’ and minimise.
4. Some submitters have requested reference to particular industry codes of practice: e.g. the *Good Farming Practice Action Plan for Water Quality 2018* (S75.11) and the *Industry Agreed Good Management Practices Relating to Water Quality (Matrix of Good Management 2015)* (S72.10). Horticulture NZ (S66) has requested amendments that include the concept of ‘Best Management Practice’ as described by the *HortNZ Code of Practice for Nutrient Management (v1.0 2014)*.
5. Submission point S87.3 requests deletion of the word ‘evolving’ from the definition of GMP.

16.2 Discussion: Definition of ‘GMP’, ‘BMP’ and ‘Additional Mitigation Measures’

6. The Farm Systems experts agreed, in their expert conferencing on lists of farming and growing practices that can be considered as ‘good’ management practice and ‘best’ management practice. These are set out on pages 6 to 10 of Annexure ‘A’ and Appendices 1, 2, 3 and 4 to the 21/22 July joint witness statement⁷². These are summarised in Appendices B, C and D of Associate Professor Horne’s section 42A technical report. All experts agree that not all of the GMPs and BMPs will be able to be implemented in all farming and growing systems. GMPs and BMPs have to be tailored to the circumstances and constraints of the property and the particular farm system.
7. The experts also agreed⁷³, that any of the GMPs, BMPs and additional innovations identified by them could be specified as minimum requirements for consent (although they refrained from offering an opinion on whether they *should* be so specified). All of the Farm Systems experts agreed that it could be useful to set minimum expectations for consideration for discretionary activity applications for CVG.

⁷² Joint Witness Statement of Farming and Growing Management Practices; Farm Systems Modelling and Farm-Scale Economics ((21 and 22 July 2020).

⁷³ Page 12 of the 21/22 July 2020 Joint Witness Statement.

8. The Farm Systems experts have reservations⁷⁴ about how GMP and BMP will be used in the consent process. Their advice is that a toolbox of available GMPs and BMPs should be used. They consider that any list used should allow GMP and BMP to evolve and should not be exclusive or prevent innovation or create an expectation that all listed GMPs and BMPs are mandatory. Associate Professor Horne reiterates this view in his section 42A technical report, noting that not all GMPs and BMPs will be relevant or appropriate for all farms. His advice is that it should not be mandatory for all practices to be adopted on all farms and that 'tool box' approach be adopted by the One Plan. Dr Anne-Maree Jolly also supports a 'tool box' approach when considering CVG. What is more important is the notion that in order to obtain resource consent, farmers and growers will need to employ a wide range of different on-farm management practices, including BMP, to effectively manage N leaching from the IFLU
9. In my opinion the lists of GMP and BMP resulting from expert conferencing will become the 'toolbox' of available mitigation measures for the foreseeable future and will be used as a reference document in evaluating future applications for IFLU activities, whether it sits in the Plan or not.
10. I understand the reservations of submitters and experts that including a list in the One Plan could stifle innovation and that any list may become outdated. This is in fact what has happened in the dairy farming sector since the One Plan became operative. As explained in David Horne's section 42A technical report, some of the practices that may have once been considered to be BMP have become commonplace and are now GMPs. Indeed, whereas Policy 5-8 (a) (i) (C) anticipates that the Table 14.2 CNLM limits will be achievable on most farms using GMPs, the list of practices considered at that time actually included practices considered then to be BMPs. Overall, however, Associate Professor Horne points out that the original evidence for the One Plan around GMP has in fact held up very well, albeit that there have been some shifts in our understanding of what is GMP and BMP over time. The concept of "GMP" in this sense is evolving.
11. My view is that, for the interim period of effect of PC2 (until reviewed by Horizons in the course of giving effect to the NPSFM), it is unlikely that any of the core GMPs would become out-dated. Given the level of concern among submitters and the level of agreement between the experts about what constitutes GMP and BMP, my view is that there would be value in including an inclusive (non-exclusive) list of GMPs and BMPs in the PC2 definitions. PC2 does not use the expression 'best management practice'. Rather, PC2 refers to 'additional innovations and measures' and 'proposed innovations and measures'. The list of GMPs and BMPs supplied by the experts for dairy farming includes GMPs, BMPs as well as emerging technology, system interventions and 'edge-of-field techniques' (i.e. GMPs, BMPs and 'additional innovations'). Some submitters have requested amendments to rules that incorporate BMPs. In my opinion it is appropriate for PC2 to refer to all three types of measures but with only GMP and BMP

⁷⁴ Reservation number 14 (page 4 of the 21/22 July 2020 Joint Witness Statement).

requiring definition. Definition could be by reference to the list agreed by the experts in conferencing, as well as the codes of practice mentioned in submissions (and also referenced by the experts). Equally, such a list could sit outside the One Plan.

12. I have proposed amendments to the policies and rules that anticipate the use of GMPs and BMPs as follows:
- (a) Compliance with the Table 14.2 CNLM limits (which will require GMP or a mix of GMP and BMP to achieve); or
 - (b) Achievement of the lesser of a value within the range 80%-90% of baseline N leaching loss or the 75th percentile N leaching rate for the water management zone (which will require GMP or a mix of GMP and BMP to achieve); or
 - (c) For CVG, implementation of GMP and BMP that will achieve a minimum 35% reduction of N leaching compared to the baseline year (2013/2014) within three years of lodging the application; and
 - (d) GMP and additional measures (including BMP) are referenced in the controlled activity reserved matters (Rule 14-1) and the restricted discretionary matters (Rule 14-2) which means conditions can be imposed requiring these practices, as appropriate to meet the N leaching limits prescribed by the rules; and
 - (e) The discretionary activity consent pathway is available for IFLU activities that cannot meet any of the above controlled activity limits.
13. The minimum 35% N leaching reduction proposed for CVG is informed by Dr Jolly's section 42A technical report which concludes that a range of 35%-45% N leaching reduction is achievable with implementation of a combination of GMP and BMP. Dr Jolly's 35% is at the upper end of the 23%-35% range identified in the earlier Page Bloomer study⁷⁵ (although Dr Jolly notes that this range is based on adoption of less GMPs). I also note that the submission of Woodhaven Gardens Ltd (S57) proposes an increasing scale of N leaching reduction from a 2017/2018 baseline, of 15% (by Year-5), 25% (by Year-10) and 36% (by Year-20). 'Year-5' in Table 14.2 is a date between 2019 and 2021 (i.e. approximately now). 'Year-10' in Table 14-2 is a date between 2024 and 2026 (i.e. about five years from now). 'Year-20' in Table 14.2 is somewhere between 2034 and 2036.
14. Given the ranges anticipated as achievable by Dr Jolly and the Page Bloomer Report and the difference in baseline year (with 2017/2018 potentially absorbing recent growing practices and starting from a baseline lower already than 20), a minimum 35% reduction implemented over a three-year period (as recommended by Dr Jolly) seems reasonable.

⁷⁵ Attached to the technical section 42A report of Ms Matthews.

15. In this section 42A technical report. Associate Professor Horne has provided his estimate of what range of N leaching reduction is achievable for different pastoral farm systems by implementing a mix of recommended GMPs and BMPs. Associate Professor Horne estimates that, for IFLU activities that cannot meet the Table 14.2 CNLMs, implementation of appropriate GMPs and BMPs should result in N leaching loss reduction of 10% to 20%. He recommends reliance on this range and explains that a single figure would not necessarily promote the improvements required (and achievable) using GMPs and BMPs. Associate Professor Horne's point is (as I understand it) that N leaching reduction relies on implementation of GMPs and BMPs and these need to be front and centre in any policy and rule framework.⁷⁶
16. For dairy IFLU activities, Associate Professor Horne supports the approach of Dairy NZ and Federated Farmers (S40 and S58) that the 25% of IFLU activities with the greatest N leaching losses should be expected to reduce their N leaching so that it is no worse than the 75th percentile for the relevant water management unit. However, as I note above, Associate Professor Horne also considers that IFLU activities that cannot meet the Table 14.2 CNLMs should be expected to implement GMPs and BMPs so as to achieve N leaching reduction in the range 10% to 20%. Associate Professor Horne anticipates that irrigated sheep and beef IFLU and arable IFLU activities will similarly also be able to make significant reductions in N leaching using GMPs and BMPs.
17. I have adapted Associate Professor Horne's recommendations in the proposed new controlled activity rule I include in **Attachment G2** (which builds on the alternative controlled activity pathway proposed by Dairy NZ and Federated Farmers NZ) by inserting a requirement for implementation of GMPs and BMPs. For completeness, I set that out again here:
- (a) The *nutrient management plan** prepared under (a) must demonstrate that the nitrogen leaching loss from the activity will:
 - i. not exceed the *cumulative nitrogen leaching maximum** specified in Table 14.2; or
 - ii. *be reduced by the implementation of good management practices* and best management practices* to a rate that is the lesser of*
 - a. *a leaching rate that is between 80% to 90% of the nitrogen leaching baseline* of the land^A or*
 - b. *the 75th percentile nitrogen leaching loss for the relevant surface water management zone*;*
18. The reserved matters for this proposed rule include:
- Control is reserved over:
- (a) the *contents*, implementation and review of the *nutrient management plan** *for the land^A*
 - (b) ~~compliance with the cumulative nitrogen leaching maximum* specified in Table 14.2~~ *the nitrogen leaching loss from the land^A and the good management practices*, best*

⁷⁶ Paragraphs 87- 89 of Associate Professor David Horne's section 42A report.

management practice (and additional measures where necessary) to limit nitrogen leaching loss from the land[^] and to avoid, remedy or mitigate nutrient leaching and run-off, faecal contamination and sediment losses from the land[^]

.....

19. For the purposes of this rule, Associate Professor Horne recommends a 'toolbox' of GMPs and BMPs included in the glossary definition. This will necessitate the amendments to the PC2 definition of 'good management practice' shown in **Attachment J1**.

16.3 Discussion: Nomenclature

20. The Farm Systems experts have consistently referred to 'good management practices'. I do not identify a recommendation in their joint witness statements to adopt any of the alternative labels suggested in submissions. I support inclusion of the terms 'good management practices' and 'best management practice'.

16.4 Recommendations

21. For the reasons explained in the foregoing paragraphs, I recommend that:
- (a) PC2 be amended by expanding the PC2 definition of 'good management practices' to include the list of GMPs and BMPs recommended by the Farm Systems experts, as detailed in **Attachment J1**, to be used as a 'toolbox' of options (and not required in every case); and
 - (b) All of the submissions and further submissions seeking change to the PC2 definition of 'good management practices' be **accepted in part** to the extent that the definition is amended as detailed in **Attachment J**.

17 Nutrient Management Plans

1. This chapter addresses the submissions relating to nutrient management plans, which are summarised in the following table:

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
Dairy NZ Limited	40.12	Retain the definition of Nutrient Management Plan as notified.		Forest and Bird (FS1.40.12) Horowhenua District Council (FS29.40.12)
Ravensdown Limited	45.14	Amend the definition of nutrient management plan as follows: “means a plan prepared annually in accordance with the Code of Practice for Nutrient Management (NZ Fertiliser Manufacturers’ Research Association 2007) which records (including copies of the OVERSEER@ input and output files of a <u>information used in and derived from the recognised nutrient management model</u> used to prepare the plan) and takes into account all sources of nutrients for intensive farming and...”	Potatoes New Zealand (FS12.45.14) Federated Farmers of New Zealand (FS11.45.14)	Forest and Bird (FS1.45.14)
Environmental Defence Society Incorporated	54.1	Reinsert reference to Overseer, update the definition to refer to the most recent Code of Practice for Nutrient Management (2017), and remove the additional wording proposed by PC2. EDS has no issue with the deletion of the wording “both a Certificate of Completion in Sustainable Nutrient Management in New Zealand Agriculture and” from the definition.	Forest and Bird (FS1.54.1) Water Protection Society (FS2.54.1) Federated Farmers of New Zealand (FS11.54.1)	Federated Farmers of New Zealand (FS11.54.1)
Wellington Fish & Game	55.2	Reinsert reference to Overseer, update the definition to refer to the most recent Code of Practice for	Forest and Bird (FS1.55.2) Water Protection Society (FS2.55.2)	Horticulture NZ (FS4.55.2)

		Nutrient Management (2017), and remove the additional wording proposed by PC2. Wellington Fish and Game Council has no issue with the deletion of the wording “both a Certificate of Completion in Sustainable Nutrient Management in New Zealand Agriculture and” from the definition.		Federated Farmers of New Zealand (FS11.55.2)
Federated Farmers of New Zealand Inc.	58.20	Amend glossary – nutrient management plan by deleting ‘annually’.	Horticulture New Zealand (FS4.58.20)	Horticulture New Zealand (FS4.58.20) Forest and Bird (FS1.58.20) Horowhenua District Council (FS24.58.20)
Director-General of Conservation	61.17	Either amend the definition of Nutrient Management Plan to refer to the latest 2013 version of the Code of Practice for Nutrient Management; or make the 2007 version available to the public.	Forest and Bird (FS1.61.17) Water Protection Society (FS2.61.17) Public Health Services Mid-Central Health Board (FS15.61.17)	Potatoes New Zealand (FS12.61.17)
Ngā Waihua o Paerangi Trust	63.26	Requiring the intensive farming activity to prepare and comply with a nutrient management plan that complies with Table 14.2 will ensure nitrogen management is within acceptable limits in the plan.	Forest and Bird (FS1.63.26)	
	63.32	Definition of ‘Nutrient Management Plan’: Retain the wording in the operative One Plan.	Forest and Bird (FS1.63.32)	
Water Protection Society	65.39	WPS supports in part insertion of a definition of ‘nutrient management plan’ WPS requests the phrase ‘recognised’ and be replaced by ‘ <u>Horizons-approved</u> ’.	Forest and Bird (FS1.65.39)	
Ngāti Turanga, Te Roopū Taiao o Ngāti Whakare	67.14, 68.14, 70.14	The definition of Nutrient Management Plan, and all references to an NMP within the One Plan, are replaced with the term “Farm Environment Plan” and new	Forest and Bird (FS1.67.14, FS1.68.14, FS1.70.14) Water Protection Society (FS2.67.14,	Federated Farmers of New Zealand (FS11.67.14, FS11.68.14, FS1.70.14)

Trust, Te Rūnanga o Raukawa		criteria are developed to specify the informational requirements of an FEP.	FS2.68.14, FS2.70.14)	
Ballance Agri-Nutrients Limited	72.11	Amend the definition of Nutrient Management Plan as follows: <u>“means a plan prepared annually in accordance with the Code of Practice for Nutrient Management (NZ Fertiliser Manufacturers’ Research Association 2007 2013) which records (including copies of the OVERSEER® input and output files of a recognised nutrient management model used to prepare the plan) and takes into account all sources of nutrients for intensive farming and identifies all current and relevant nutrient management practices and mitigations, and which is prepared by a person who has both a Certificate of Completion in Sustainable Nutrient Management in New Zealand Agriculture and a Certificate of Completion in Advanced Sustainable Nutrient Management from Massey University, is reviewed annually and updated following any significant change to farming system.</u> Consequently, amend Rule 14-5 to delete reference to the 2007 CoP and insert reference to the 2013 CoP.		Forest and Bird (FS1.72.11) Federated Farmers of New Zealand (FS11.72.11)
Potatoes New Zealand	75.12	Amend the definition of Nutrient Management Plan to substitute reference qualifications of suitably qualified person, for a person who has <u>“been approved by the CEO, Manawatu-Whanganui Regional Council...”</u>	Horticulture New Zealand (FS4.75.12) Chris Pescini – Pescini Brothers Ltd (FS6.75.12) Woodhavens Gardens (FS8.75.12) Horowhenua District Council (FS27.75.12)	Forest and Bird (FS1.75.12) Federated Farmers of New Zealand (FS11.75.12)

		Refer to Potatoes New Zealand submission for proposed policy framework.		
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17.1 Relief Requested and Issues Raised

2. PC2 proposes the following amendments to the One Plan Glossary definition of 'nutrient management plan' (NMP):

'Nutrient Management Plan' means a plan prepared in accordance with the Code of Practice for Nutrient Management (NZ Fertiliser Manufacturers' Research Association 2007) which records (including copies of the ~~OVERSEER~~ input and outfiles of a recognised nutrient management model used to prepare the plan) and takes into account all sources of nutrients for intensive farming and identifies all current and relevant nutrient management practices and mitigations and which is prepared by a person who has ~~both a Certificate of Completion in Sustainable Nutrient Management in New Zealand and a Certificate of Completion in Advanced Sustainable Nutrient Management from Massey University.~~

3. Many of the submission points have highlighted the fact that the Code of Practice referred to in the definition of NMP has been superseded by a more recent version. Submission point S72.11 notes that the Code of Practice reference in Rule 14-5 is also out of date. Submitters have opposing views on whether the definition should include or delete reference to Overseer. There is some support for deleting the requirement to hold both the qualifications referenced in the definition. Other submitters have requested replacement of the requirement for qualifications with a simple approval by Horizons' CEO.
4. Some submitters (S67.14, S68.14, S70.14) have suggested that the expression 'nutrient management plan' should be replaced by 'Farm Environment Plan'. Submission point S72.11 suggests NMPs required by the rules should be reviewed annually.

17.2 Discussion

5. The date of the Code of Practice referenced in the definition needs to be changed from 2007 to 2013. A similar change needs to be considered where there is reference to the Code of Practice elsewhere. PC2 did not propose any changes to Rule 14-5 (it controls fertiliser use), so any change to that rule could be considered to be out of scope. However, the reference in Rule 14-5 (condition (c) - *Code of Practice for Nutrient Management (New Zealand Fertiliser Manufacturers' Research Association, 2007)* is also out of date and I recommend correcting the date under Clause 16 of Schedule 1 Clause 16 as a minor error.

6. Dr Anne-Maree Jolly explains in her section 42A technical report that NMPs are typically used to address only nutrients. Dr Jolly considers that a nutrient-focused NMP may be sufficient for a controlled activity IFLU activity that meets the specified N leaching limits. Dr Jolly recommends that, for the discretionary activity pathway, a more comprehensive Farm Environment Plan (FEP) should be required, so as to address nitrogen, phosphorus, sediment and faecal contamination. In fact, PC2 proposes (through Policy 14-6 (b)) that all applications for consent, including controlled activity consent, must address all nutrients (phosphorus as well as nitrogen and sediment).
7. Part 9A of the Resource Management Amendment Act 2020 introduced a requirement that farms must have a certified 'freshwater farm plan' (**FFP**) where:⁷⁷
- (a) 20 or more hectares of the farm is arable; or
 - (b) 5 or more hectares of the farm is horticultural; or
 - (c) 20 or more hectares of the farm is pastoral; or
 - (d) 20 or more hectares of the farm is a combination of (a) to (c).
8. Where required, a FFP applies to the entire farm and must identify and address potential adverse effects on freshwater and freshwater ecosystems and demonstrate how any outcomes prescribed in regulations (such as the NES-FM Regulations) are to be achieved.⁷⁸ Regional councils are required to receive FFP audit reports, monitor and enforce compliance with FFPs.⁷⁹ The FFP requirements are not yet in force but are to be gazetted sometime in the future. To the extent that the scope of a FFP is likely to include nutrient management, there seems little point in duplicating requirements. I consider it would be appropriate to amend the definition of NMP to recognise that an NMP could be a section of a FFP provided it covers the matters listed in Policy 14-6 and Rules 14-1, 14-2 and 14-2A.
9. Part 9A of the RMA also sets out the requirements that will apply to FFP certifiers and FFP auditors. Section 217K requires that the regional council must appoint FFP certifiers and auditors and they must meet criteria (to be) prescribed in regulations. My view is that the issue around qualifications of people preparing NMPs will become superseded by the RMA requirements for the certification and auditing of FFPs. I propose supplementing the definition of NMP to reflect that. My view is that this is an appropriate approach for now but that the definition will likely need to be revisited in Horizons' planned review to give effect to the NPS-FM.
10. I do not consider that the frequency of review of a NMP should be specified, either, in the definition or in the rules. My view is that this will be specified in conditions of

⁷⁷ Section 217D, Part 9A RM Amendment Act 2020.

⁷⁸ Section 217F, Part 9A RM Amendment Act 2020.

⁷⁹ Section 217F, Part 9A RM Amendment Act 2020.

consent, alongside the required content of the NMP, including GMPs, BMPs and additional measures. Policy 14-6 (b) requires that applications for all IFLU activities must address all nutrient run-off and leaching, sediment losses and faecal contamination. The amendments I propose to the Rule 14-1 reserved matters and Rule 14-2 discretionary matters also specify these contaminants within the scope of matters for which conditions can be imposed. The expression 'nutrient management plan' is used in other One Plan rules where the suite of matters relevant for IFLU activities may not be relevant. For that reason, I do not propose inserting these other matters into the original definition of NMP. I do, though, recommend that sediment loss and faecal contamination be specified within the required scope of a FPP.

17.3 Recommendations

11. For the reasons discussed in the foregoing paragraphs, I recommend that:

(a) The PC2 definition of 'Nutrient Management Plan' be amended as follows:

'Nutrient Management Plan means a plan prepared, ~~either:~~

- a. in accordance with the Code of Practice for Nutrient Management (NZ Fertiliser Manufacturers' Research Association ~~2013~~ 2007) which records ~~(including copies of the OVERSEER input and outfiles of a recognised nutrient management model used to prepare the plan)~~ and takes into account all sources of nutrients for intensive farming ~~(and includes copies of the OVERSEER input and outfiles of a recognised nutrient management model used to prepare the plan)~~ and identifies all current and relevant nutrient management practices and mitigations and which is prepared by a person who has ~~both a Certificate of Completion in Sustainable Nutrient Management in New Zealand and a Certificate of Completion in Advanced Sustainable Nutrient Management from Massey University;~~ or
- b. as a component of a certified freshwater farm plan[^] prepared for the purpose of Part 9A of the Resource Management Act 1991 which records and takes into account all sources of nutrients for intensive farming (and includes copies of the input and outfiles of a recognised nutrient management model used to prepare the plan) and identifies all current and relevant nutrient management practices and mitigations and addresses potential sediment loss and faecal contamination.'

(b) The submission points of Dairy NZ (S40.12), Ravensdown Limited (S45.14), EDS (S54.1), Fish and Game (S55.2), Federated Farmers NZ (S58.20), the Director General of Conservation (S61.17), Ngā Waihuia o Paerangi Trust (S63.26, S63.32), the Water Protection Society (S65.39), Ngāti Turanga (S67.14), Te Roopū Taiao o Ngāti Whakarete (S68.14), Te Rūnanga o Raukawa (S70.14), Ballance Agri-

Nutrients Ltd (S72.11), Potatoes NZ (S75.12) be **accepted in part** to the extent that the PC2 requirements for nutrient management plans are retained but amended; and

- (c) The further submission points in support of and opposed to the submission points listed in (b) above be **accepted in part** to the extent that the PC2 requirements for nutrient management plans are retained but amended; and
- (d) That the Panel recommend to Horizons that One Plan Rule 14-5 be amended, pursuant to Clause 16 (2) of Schedule 1 of the RMA, to correct the date of the Code of Practice referenced in rule 14-5 Condition (c) to read: Code of Practice for Nutrient Management (New Zealand Fertiliser Manufacturers' Research Association, 2013 ~~2007~~).

18 Requested Amendments to Methods

18.1 Relief Requested

1. The amendments to Methods requested by submitters are detailed in the annotated version of PC2 contained in **Attachment E** and are summarised in the following tables. The tables below also detail my recommendation in respect of each item of requested relief and explain my reasons for those recommendations. I include in **Attachment K** a table detailing (in the left-hand column) the amendments I recommend to One Plan Methods to address the issues raised in submissions and (in the right-hand column) I comment on the rationale for the proposed amendments.
2. I recommend that the submission points listed below be accepted or accepted in part or rejected for the reasons explained in the 'Reasons' column below. I also recommend that the further submission points that support or oppose those submission points be accepted or rejected as detailed in the Table in **Attachment E1**: (see over)

Submitter	Sub No.	Summary of Requested Relief: Method 5-12	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
DairyNZ	40.2	Clarify that the research referred to is to focus on N loss mitigation options	Horowhenua DC FS29.40.2	Forest & Bird FS1.40.2	Accept in part	I propose inserting reference to 'including nitrogen loss mitigation options' to make it clearer.
Ravensdown	45.4	Amend Method 5-12: <u>Description</u> <i>Support initiatives by local communities, sector groups or tangata whenua which develop options for sustainable land use in the Region. Support for work in Water Management Sub-zones* where nitrogen leaching is an issue, <u>as identified in Table 14.1</u>, will be a priority in order to find viable options for intensive farming land users to sustainably reduce nitrogen leaching from their farming activities that will have difficulty in achieving the cumulative nitrogen leaching maximums* (refer Table 14.1).</i>		Forest & Bird FS1.45.4 Federated Farmers NZ FS11.45.4	Accept in part	I propose to insert reference to Table 14.1 (clarifying that this is where problematic nitrogen leaching is identified geographically in the One Plan). In my opinion the words of Method 5-12 are self-explanatory and do not need to reference 'sustainably' reducing nitrogen. It is not clear whether that could mean environmental or economic sustainability for individual farms.
Federated Farmers NZ	58.3	Amend Method 5-12: <i>Support for work in Water Management Sub-zones* where nitrogen leaching is an issue (refer Table 14.1) will be a priority</i>	The first-round submissions of:	Forest & Bird FS1.58.3	Accept in part	I propose to insert reference to Table 14.1.

Submitter	Sub No.	Summary of Requested Relief: Method 5-12	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		in order to find <u>financially and practically viable options (including N loss mitigation options)</u> for intensive farming land users that will have difficulty in achieving the <u>cumulative nitrogen leaching maximums*</u> or making achieving reductions to the lesser of 90% of the land's nitrogen baseline or the 75th percentile nitrogen leaching loss (refer Table 14.1). Horizons will provide assistance through providing data and information that will assist in the identification and evaluation of innovative N loss mitigations or land use options and participating in any evaluative work as appropriate.	Lisa & Paul Charmley S3.2 Ian Grant and Shirley Cumming S47.2 Sarah von Dadelszen S48.2 Russell & Karen Phillips S52.2	Horowhenua DC FS24.58.3		Financial and practical considerations are inherent in the concept of 'viability'. I see no need to expand on that in the text. The method intends to prioritise assistance to IFLU activities that cannot meet the Table 14.2 CNLM limits. This remains a relevant and appropriate focus. There is no need to tailor the method to the alternative consent pathway proposed by Dairy NZ and Federated Farmers NZ. I propose to insert the words 'nitrogen loss mitigations or' as suggested by S58.3.
Ngā Waihua o Paerangi Trust	63.8	Include ' <u>tangata whenua</u> ' within the 'who' row of Method 5-12.	Forest & Bird FS1.63.8	Federated Farmers NZ FS11.63.8	Accept	I propose amendments to include tangata whenua.
Water Protection Society	65.19	Supports the addition of Method 5-12	Forest & Bird FS1.65.19		Accept in part	The submission point is accepted in part. Although I accept the endorsement of Method 5-12, I also propose amendments

Submitter	Sub No.	Summary of Requested Relief: Method 5-12	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
						to address issues raised in other submissions.
Horticulture NZ	66.4	Amend 'Description' of Method 12: <u>"Support initiatives by local communities, sector groups or tangata whenua which develop options for sustainable land use in the Region. Support for work in Water Management Subzones* where nitrogen leaching is an issue, will be a priority in order to find viable options for intensive farming land users to make improvements to water quality to contribute to achieving water quality targets over-time. that will have difficulty in achieving the cumulative nitrogen leaching maximums* (refer Table 14.1)."</u>	Chris Pescini FS6.66.4 Woodhaven Gardens FS8.66.4 Horowhenua DC FS26.66.4	Forest & Bird FS1.66.4 DairyNZ FS9.66.4 Federated Farmers NZ FS11.66.4	Reject	I propose amendments picking up the suggestions made in other submissions. My view is that the PC2 wording is better targeted to the issue (IFLU activities, not all land users) and the reduction of N.
Ngāti Turanga, Te Roopū Taiao o Ngāti	67.3 68.3	Amend: <u>"Support initiatives by local communities, and sector groups or in consultation with tangata whenua"</u>	Forest & Bird FS1.67.3, FS1.68.3, FS1.70.3	Federated Farmers NZ FS11.67.3, FS11.68.3, FS11.70.3	Accept	I propose amendments to include tangata whenua.

Submitter	Sub No.	Summary of Requested Relief: Method 5-12	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
Whakatere Trust, Te Rūnanga o Raukawa	70.3	<u>which develop options for sustainable land use in the region."</u> <u>"Local communities including tangata whenua, rural and other sector groups, Territorial Authorities, Regional Council..."</u> Recommend that the wording is amended to read: Advice and assistance is available for landowners and tangata whenua in the Region regarding land use management practices".	Water Protection Society FS2.67.3, FS2.68.3, FS2.70.3			

Submitter	Sub No.	Summary of Requested Relief: Method 5-13	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
DairyNZ	40.3	Clarify that Table 14.2 leaching maximums <i>will</i> be updated following new versions of Overseer version issues if the version change makes a	Horticulture NZ FS4.40.3	Forest & Bird FS1.40.3	Accept in part	I recommend amendment to clarify that Horizons will update the One Plan where necessary. This may or may not be necessary during the likely short period

Submitter	Sub No.	Summary of Requested Relief: Method 5-13	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		material difference to the calculated leaching maxima. This should be achieved by including the methodology for calculation of the Table 14.2 CNLMs in a schedule to the One Plan and by providing for Table to be updated in accordance with that Schedule without the RMA Schedule One process.		Horowhenua DC FS29.40.3		during which the PC2 provisions are operative and will then be revisited as part of Horizons' plan change process for implementation of the NPS-FM 2020. I also recommend that a 'reference file' methodology be incorporated into PC2, following the advice of Associate Professor David Horne. The details of which will be circulated as soon as practicable.
Ravensdown	45.5	Amend Method 5-13: <u>Description</u> <i><u>Horizons will collate and publish information regarding Overseer version changes and the identification and evaluation of nutrient management models other than Overseer that may be more appropriate for calculation of on-farm nutrient losses.</u></i>		Forest & Bird FS1.45.5 Federated Farmers NZ FS11.45.5	Accept	I agree the method is more relevant if the information is about Overseer, rather than being limited to 'version changes'.
Federated Farmers NZ	58.4	Amend Method 5-13: Description Horizons will collate and publish information regarding, and be	Horticulture NZ FS4.58.4	Forest & Bird FS1.58.4	Accept in part	I propose amendments that commit Horizons to updating the One Plan, in relation to Overseer, where necessary. That is sufficient, in my view. I also

Submitter	Sub No.	Summary of Requested Relief: Method 5-13	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		responsive to, Overseer version changes - To the extent that Table 14.2 continues to apply to farming activities, Horizons will update Table 14.2 in response to Overseer version changes consider whether it needs to respond to changes in Overseer through a plan change process (where necessary) and develop a methodology to provide for future updates without the need for continual plan changes. - A list of nutrient management models appropriate for use in intensive farming land is maintained on Horizons' website.	Beef & Lamb NZ FS14.58.4 The first-round submissions of: Lisa & Paul Charmley S3.3 Ian Grant and Shirley Cumming S47.3 Sarah von Dadelszen S48.3 Russell & Karen Phillips S52.3	Horowhenua DC FS24.58.4		recommend that a 'reference file' methodology be incorporated into PC2, following the recommendation of Associate Professor David Horne. The details of which will be circulated as soon as practicable.
Water Protection Society	65.20	Supports the addition of Method 5-13	Forest & Bird FS1.65.20		Accept in part	I proposed amendments to Method 5-13 to address issues raised in other submissions.
Ngāti Turanga,	67.4	Information proposed under Method 5-13 should be provided to tangata whenua as part of the arrangements	Forest & Bird FS1.67.4, FS1.68.4, FS1.70.4	Federated Farmers NZ FS11.67.4,	Accept	I propose 'tangata whenua' be inserted into Method 5-13.

Submitter	Sub No.	Summary of Requested Relief: Method 5-13	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
Te Roopū Taiao o Ngāti Whakare Trust, Te Rūnanga o Raukawa	68.4 70.4	set out in RPS Chapter 2. Amend wording of the 'Who' to read: Regional Council, <u>tangata whenua</u> , rural sector groups, and nutrient management model providers".	Water Protection Society FS2.67.4, FS2.68.4, FS2.70.4	FS11.68.4, FS11.70.4		
Ballance Agri-Nutrients	72.5	Retain Method 5-13 as notified and add a new bullet point: <u>"• The assessment criteria for nutrient management models appropriate for use in intensive farming are published on Horizons' website."</u>	Federated Farmers NZ FS11.72.5	Forest & Bird FS72.5	Reject	I am of the opinion that this is covered already by the text under 'Description' in Method 5-13.
Beef & Lamb NZ	74.8	Delete the sentence <u>"Horizons will consider whether it needs to respond to changes in Overseer through a plan change process."</u>	Horticulture NZ FS4.74.8	Forest & Bird FS1.74.8 Federated Farmers NZ FS11.74.8 Horowhenua DC FS33.74.8	Accept in part	I propose amendments that will see Horizons updating the One Plan, in relation to Overseer, where necessary to respond to significant upgrades.

19 Requested Amendments to Policy 5-8

19.1 Relief Requested

1. The amendments to Policy 5-8 requested by submitters are detailed in the annotated version of PC2 contained in **Attachment L** and are summarised in the following table. The table also details my recommendation in respect of each item of requested relief and explains my reasons for those recommendations. I include in **Attachment L** a table detailing (in the left-hand column) the amendments I recommend to Policy 5-8 to address the issues raised in submissions and (in the right-hand column) I comment on the rationale for the proposed amendments.
2. The table below addresses requested amendments to the publicly notified PC2 provisions. The requested amendments of submitters seeking exclusions or exceptions from the publicly notified PC2 provisions (e.g. for CVG, agriculture and WWTP land irrigation) are addressed in other chapters of this report.
3. I recommend that the submission points listed below be **accepted** or **accepted in part** or **rejected** for the reasons explained in the '**Reasons**' column below: (see over)

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
Dairy NZ Federated Farmers NZ Lisa & Paul Charmley Ian Grant and Shirley Cumming Sarah von Dadelszen Russell & Karen Phillips	40.1 58.1 3.1 47.1 48.1 52.1	Insert 'where practicable' to 5-8 (b) requirements relating to faecal contamination; and Supports deletion of 5-8 (a) (i) (B).	Horticulture NZ FS4.40.1, FS4.58.1	Forest & Bird FS1.40.1, FS1.58.1 Beef & Lamb NZ FS14.40.1, FS14.58.1 Horowhenua DC FS29.40.1, FS24.58.1	Accept in part	Policy 5-8 (b) addresses faecal contamination associated with both existing and new IFLU activities. The submission point is somewhat overtaken now by the 2020 NES-FM. There is no justification for making the requirement 'where practicable' (and practicability will be determined on individual applications). I propose to retain Policy 5-8 (a) (i) (B) but amended to replace the requirement to 'achieve' the water quality strategies with 'contribute to achieving'. As discussed earlier in this report, the N leaching limits were not and are not intended to be the sole means of achieving the water quality strategies in Chapter 5 of the One Plan.
Federated Farmers NZ Lisa & Paul Charmley Ian Grant and Shirley Cumming	58.2 3.1 47.1 48.1	If there is scope, amend 5-8 (a) (iii) to delete reference to nitrogen leaching maximums specified in (i) and adopt similar approach as proposed by FFNZ for existing IFLUs (i.e. 90% of land's baseline or 75 th percentile).	Horticulture NZ FS4.58.2	Forest & Bird FS1.58.2 Horowhenua DC FS24.58.2	Reject	PC2 does not intend or propose any changes to the fundamental approach for new IFLU activities (including compliance with the Table 14.2 limits). Non-compliance with Table 14.2 as a new IFLU will require consent as a restricted discretionary activity under Rule 14-4. The NES-FM will impose new requirements on some agricultural intensification before the end of 2024 that will need to be incorporated into the One

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
Sarah von Dadelszen Russell & Karen Phillips	52.1					Plan. This includes conversions from forestry to pastoral land use, conversions of farm land to dairy farming, irrigation of dairy farm land, or the use of land as 'dairy support' land over certain thresholds; where those restrictions apply resource consent can only be granted if it will not increase contaminant loads in the catchment, compared with what was present at the close of 2 September 2020. Unless or until that occurs (and in any event), an NES 'prevails over' rules in a plan in the event of conflict (unless the One Plan is more stringent, which then applies). This means that consent requirements under the NES-FM must be complied with regardless of whether they have been reflected in the One Plan. There is no justification for easing the provisions relating to new (intensified) IFLU activities.
Kahungunu ki Tāmaki nui-a-Rua Trust	4.1	Reinstate the operative wording of Policy 5-8 (a) (i) (B) (i.e. do not make the changes proposed by PC2 – retain the wording 'will achieve the strategies' for water quality).	Forest & Bird FS1.4.1 Water Protection Society FS2.4.1		Accept in part	I propose to retain Policy 5-8 (a) (i) (B) but amended to replace the requirement to 'achieve' the water quality strategies with 'contribute to achieving'. As discussed earlier in this report, the N leaching limits were not and are not intended to be the sole means of achieving the strategies.

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
	4.2	Require intensive land use consents to meet the nitrogen allocation table unless a robust assessment of effects can demonstrate an improvement in water quality and provides a timeline and pathway towards meeting nutrient limits and targets.	Forest & Bird FS1.4.2 Water Protection Society FS2.4.2		Accept in part	I propose amendments to Policy 5-8 (and Policies 14-5 and 14-6) to require existing IFLU activities to implement GMP and BMP to achieve minimum N leaching reduction within the shortest practicable timeframe. Specifically, I recommend a change to Policy 5-8 (a) (iia) requiring existing IFLU to be regulated in a manner to reduce N leaching from the land to the maximum extent practicable in the shortest feasible timeframe.
	4.7	Clearly link Policy 5-8 to water quality objectives.	Forest & Bird FS1.4.7 Water Protection Society FS2.4.7		Accept	This is implicit in the existing framework because Policy 5-8 sits under the water quality objectives. There is also explicit reference at the outset of Policy 5-8 that it must give effect to Policies 5-3 through 5-7, which in part arises out of recommendations of submissions to make clearer the linkage to the water quality strategy framework. There is explicit reference also to the relevant RPS water quality policies (in 5-8(a)(iia)(B) (now (E))).
Ravensdown	45.1	Confirm the amendments to the title of Policy 5-8 as per PC2.		Forest & Bird FS1.45.1	Accept	I propose no change to the title of Policy 5-8.
	45.2	Amend 5-8 (a) (iia) and (iib): <u>(iia) Existing intensive land[^] use to minimise nitrogen leaching the degree of non-compliance, having</u>	Federated Farmers NZ FS11.45.2	Forest & Bird FS1.45.2	Accept in part	I propose amendment to 5-8 (a) (iia) and (iib) to refer to absolute N leaching loss, rather than to the extent of non-compliance or exceedances of the CNLM. The wording

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		<u>regard to:</u> <u>(A) the feasibility, practicality, and cost of achieving the nitrogen leaching reductions maximums specified in (A) and</u> <u>(iib) Existing land[^] use activities which do not comply with (ii) but are intended to transition and only where there is no increase in the exceedance of the nitrogen leaching losses from the existing land[^] use activity maximums established under (a).</u>				is more accurate than the reference to 'degree of non-compliance'. With respect to (iib) there is benefit in it being made clearer that there must be no increase in N.
	45.3	Amend Policy 5-8 (d): <u>"Good management practices"</u> <u>(i)All intensive farming land[^] use activities must be regulated to manage nutrient leaching and run-off, faecal contamination, and sediment losses in accordance with good management practices"</u>		Forest and Bird (FS1.45.3)	Reject	The One Plan intention is clear: that regulation is required and I support retention of regulation.
EDS Wellington Fish & Game Council	54.2 55.3	Delete Policy 5-8 (a) (iia) and delete " <u>(iia) and</u> " from (a) (ii). Insert " <u>as a minimum</u> " to the end of sub-clause (d)(i).	Forest & Bird FS1.54.2, FS1.55.3 Water Protection Society	Federated Farmers NZ FS11.54.2, FS11.55.3 Dairy NZ FS9.55.3	Accept in part	As a form of alternative relief, I propose amending 5-8 (a) (i) (C) (now (D)) to require GMP and additional measures. This provides for the fact that there may be other measures beyond GMP where that is necessary to achieve minimum N leaching reductions. I otherwise support the

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
			FS2.54.2, FS2.55.3			retention of Policy 5-8 (a) (iia) in the form proposed in my response to submissions.
Director General of Conservation	61.1	Delete proposed wording: "In order to give effect to Policy 5-7, the effects of intensive farming land use activities on groundwater and surface water must be managed in the following manner."	Forest & Bird FS1.61.1 Water Protection Society FS2.61.1 Public Health Services FS15.61.1		Reject	The preamble is relevant and important to the meaning of the words that follow.
	61.2	Amend 5-8 (a) (iia) to provide direction on what degree of good management practice is necessary, what level of N reduction is acceptable and how costs are balanced with environmental outcomes. Delete sub-clause (A).	Forest & Bird FS1.61.1, FS1.61.2 Water Protection Society FS2.61.1, FS2.61.2 Public Health Services FS15.61.1, FS15.61.2	Federated Farmers NZ FS11.61.2	Accept in part	I propose amendments to Policy 5-8 (and Policies 14-5 and 14-6) to require existing IFLU activities to implement GMP and additional measures to achieve minimum N leaching reduction within the shortest feasible timeframe. See also my response to submission 4.2 above and the discussion in Chapter 9.

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
	61.3	Delete 5-8 (a) (iib) or amend to clearly direct the process, steps and timeframes for the implementation of this policy.	Forest & Bird FS1.61.3 Water Protection Society FS2.61.3		Accept in part	I propose amendment of Policy 5-8 (a) (iib) to strengthen the requirements, including specifying a maximum 5-year period for transition. I also propose an amendment to Policy 14-6 (f) (iii) to clarify that, at the end of the 5-year period, these IFLU activities cannot resume.
Ngā Waihua o Paerangi Trust	63.1	Amend Policy 5-8 introduction to read <u>"In order to give effect to Policies 5-2, 5-3, 5-4, 5-5 and 5-6, the effects of intensive farming land use activities on groundwater and surface water quality must be managed in the following manner..."</u>	Forest & Bird FS1.63.1	Federated Farmers NZ FS11.63.1	Accept in part	I propose amendment of the opening words to refer to these policies (except 5-2 which is administrative and less directly relevant).
	63.2	Retain (do not delete) 5-8 (a) (i) (B)	Forest & Bird FS1.63.2	Federated Farmers NZ FS11.63.2	Accept in part	I propose to retain Policy 5-8 (a) (i) (B) but amended to replace the requirement to 'achieve' the water quality strategies with 'contribute to achieving'. As discussed earlier in this report, the N leaching limits were not and are not intended to be the sole means of achieving the water quality strategies in the One Plan.
	63.3	Retain unchanged existing wording of 5-8 (a) (i) (E).	Forest & Bird FS1.63.3	Federated Farmers NZ FS11.63.3	Accept in part	I propose to specify time frames within Policy 14-5 and in the rules to address this point and the concerns of other submitters.

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
	63.5 63.6 63.4	Delete 5-8 (a) (iia); Delete 5-8 (a) (iib); and In 5-8 (a) (ii), delete reference to the exceptions in 5-8 (iia) and (iib).	Forest & Bird FS1.63.5, FS1.63.6 and FS1.63.4	Federated Farmers NZ FS11.63.5, FS11.63.6 and FS11.63.4	Accept in part	This submission effectively seeks to delete the exceptions for existing IFLU. I do not consider that appropriate. I propose to retain Policy 5-8 (a) (iia) and (iib), however, amended by reference to submissions to strengthen the matters to be given regard to when regulating these activities.
	63.7	Delete 5-8 (d).	Forest & Bird FS1.63.7	Federated Farmers NZ FS11.63.7	Accept in part	Policy 5-8 (d) is important, because it sets out the expectation that all (existing and new) IFLU activities must adopt GMP to manage N and other contaminants. I propose amendments to (d) to require implementation and to make it explicit that GMPs are the minimum practices required.
Water Protection Society	65.1	Supports the proposed [PC2] change to the title of Policy 5-8.	Forest & Bird FS1.65.1 Federated Farmers NZ FS11.65.1	Horticulture NZ FS4.65.1	Accept	No change is proposed to the title of Policy 5-8.
	65.3 65.18 65.4 65.12	Requests a new clause (a) that states: <u>'(a) All intensive farming land^ use activities must be regulated to manage nutrient leaching and run-off, faecal contamination, and sediment losses in accordance with good management practices*.</u>	Forest & Bird FS1.65.3, FS1.65.4, FS1.65.12, FS1.65.16, FS1.65.18	Horticulture NZ FS4.65.3, FS4.65.4, FS4.65.12, FS4.65.16, FS1.65.18	Accept in part	It is not necessary to elevate the wording of 5-8 (d) to (a) as requested. It is not clear why that would be necessary. I propose other amendments to strengthen the policy framework. It is explicit, throughout, that GMPs are required as a minimum as well as other measures to address all of the stated contaminants, including N.

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
	65.16	And re-number (a) (Nutrients) as '(b)'; re-number (b) as '(c)'; re-number (c) as '(d)'.		Federated Farmers NZ FS11.65.3		
	65.5	Amend 5-8(a)(i)(A): (i) <u>Nitrogen leaching maximums must be established in the regional plan which:</u> <u>...take into account all the non-point and point sources of nitrogen contamination of ground and surface water in the catchment.</u>	Forest & Bird FS1.65.5	Horticulture NZ FS4.65.5 Federated Farmers NZ FS11.65.5	Accept in part	I propose to delete the reference to 'non-point' which has similar effect. I do not consider the other wording to be necessary. The change reflects the reality that the CNLMs were set in the context of actual degraded water quality and all sources contribute to that.
	65.6	Retain and amend (B): <u>"(B) will, together with other aspects of this Policy, achieve the strategies-goals for surface water[^] quality set out in Policies 5-2, 5-3(a), 5-4(a) and 5-5(a), and the strategy goal for groundwater quality set out in Policy 5-6(a)."</u>	Forest & Bird FS1.65.6	Horticulture NZ FS4.65.6 Federated Farmers NZ FS11.65.6	Accept in part	I propose to retain Policy 5-8 (a) (i) (B) but amended to replace the requirement to 'achieve' the water quality strategies with 'contribute to achieving'. As discussed earlier in this report, the N leaching limits were not and are not intended to be the sole means of achieving the water quality strategies under the One Plan.
	65.7	Amend 5-8 (E): <u>"(E) Provide for appropriate timeframes for leaching to be decreased sufficiently to achieve the nitrogen leaching maximums established under</u>	Forest & Bird FS1.65.7	Horticulture NZ FS4.65.7 Federated Farmers NZ FS11.65.7	Accept in part	I propose amendments to Policy 5-8 (and Policies 14-5 and 14-6) to require existing IFLU activities to implement GMP and additional measures to achieve minimum N leaching reduction within the shortest

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		<u>this Policy, if they are not already being met. The time allowed to meet the nitrogen leaching maximums will be determined by the practicality, complexity and cost of modifying farm practice to do so but in no case will exceed 10 years. Proposals for decreasing leaching to below the established maximums over more than 3 years will require milestones to be specified and achieved."</u>				practicable timeframe. Consideration of practicality and cost are valid matters for consideration, but are not the sole or dominant consideration. See also my response to submission 4.2 above. I also propose to specify time frames within Policy 14-5 and in the rules to address this point and the concerns of other submitters.
	65.8	Amend 5-8 (a) (ii): 'Existing intensive farming <i>land</i> [^] use activities must be regulated in targeted <i>Water Management Sub-zones</i> * to achieve the nitrogen leaching maximums specified <u>established in under (i) within the timeframes established under (i)(E)</u> except as provided for in (iia) and (iib) below'.	Forest & Bird FS1.65.8	Horticulture NZ FS4.65.8 Federated Farmers NZ FS11.65.8	Accept in part	I propose amendments to Policy 5-8 (and Policies 14-5 and 14-6) to require existing IFLU activities to implement GMP and additional measures to achieve minimum N leaching reduction within the shortest practicable timeframe, but allowing for exceedance of Table 14.2 (within specified limits).
	65.9	Amend 5-8 (a) (iia): "(iia) Existing intensive <u>farming</u> <i>land</i> [^] use activities which do not comply with (ii) <u>the nitrogen leaching maximums established under (i) within 5 years</u> must be regulated to reduce nitrogen	Forest & Bird FS1.65.9	Horticulture NZ FS4.65.9 Federated Farmers NZ FS11.65.9	Accept in part	The minor editorial correction is necessary to ensure consistent language. I propose amendments to Policy 5-8 (and Policies 14-5 and 14-6) to require existing IFLU activities to implement GMP and additional measures to achieve minimum N leaching

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		leaching which is in excess of the nitrogen leaching maximums established under (a) by implementing good management practice*, and additional measures sufficiently to achieve the nitrogen leaching maximums within 10 years by implementing additional measures.				reduction within the shortest practicable timeframe, but allowing for exceedance of Table 14.2 (within specified limits).
	65.10	Amend 5-8(a)(iib): <u>'Existing intensive farming land[^] use activities which do not comply with (ii) but are intended to transition to an alternative non-intensive farming land[^] use within 5 years must be regulated to ensure that they are able to continue for a limited period of time in order to enable that transition and only where there is no increase in the exceedance of the nitrogen leaching maximums established under (a).</u> '	Forest & Bird FS1.65.10	Horticulture NZ FS4.65.10 Federated Farmers NZ FS11.65.10	Accept	The minor editorial correction is necessary to ensure consistent language. I propose to insert a 5-year time frame into Policy 5-8 (a) (iib).
	65.11	Insert the following clause after Policy 5-8(a)(iii): <u>'(iv) All existing intensive farming land use activities must comply with the nitrogen leaching maximums established under (i) within 10 years.</u>	Forest & Bird FS1.65.11	Horticulture NZ FS4.65.11 Federated Farmers NZ FS11.65.11	Accept in part	I propose amendments to Policy 5-8 (and Policies 14-5 and 14-6) to require existing IFLU activities to implement GMP and additional measures to achieve minimum N leaching reduction within the shortest practicable timeframe, but allowing for

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		<u>For the avoidance of doubt, any existing intensive farming land use which does not comply with the nitrogen leaching maximums established under (i) within 10 years are prohibited activities.'</u>				exceedance of Table 14.2 (within specified limits).
	65.13	Delete 'amongst other things' from 5-8 (b) (i).	Forest & Bird FS1.65.13 Federated Farmers NZ FS11.65.13	Horticulture NZ FS4.65.13	Reject	The matters listed are not the only things the provisions require of IFLU activities.
	65.14	Replace 5-8(b)(i)(B) with: "mitigate faecal contamination of surface water [^] from other entry points (e.g., face run-off from races, stand-off pads and paddocks)."	Forest & Bird FS1.65.14	Horticulture NZ FS4.65.14 Federated Farmers NZ FS11.65.14	Accept	The suggested wording makes more sense. The One Plan does not define 'stand-off'. The One Plan does not have a definition for 'stand-off pads' but does have a definition for 'feed pads'. The added words do not expand the requirements of the policy – only provide clearer examples and I consider the requested amendment is a minor amendment that is within the scope of PC2 because it is part of the suite of provisions that PC2 amends I propose amendment to 5-8 (b) (1) (B) to expand the examples given there.
	65.15	Delete 5-8 (b) (i) (C).	Forest & Bird FS1.65.15	Horticulture NZ FS4.65.15 Federated Farmers NZ FS11.65.15	Reject	5-8 (b) (i) (C) is relevant and reasonable. There is no apparent justification for deletion. The submitter's concerns about ensuring land use change within reasonable time frames is addressed in

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
						other amendments I propose to Policies 14-5 and 14-6.
	65.17	Replace 5-8 (c) (i) with: <i><u>"In those Water Management Sub-zones* where agricultural land^ use activities are the predominant cause of elevated sediment levels in surface water^, the Regional Council will promote require the preparation and implementation of voluntary management plans under the Council's Sustainable Land Use Initiative or Whanganui Catchment Strategy for the purpose of reducing the risk of accelerated erosion*, as described in Chapter 4."</u></i>	Forest & Bird FS1.65.17	Horticulture NZ FS4.65.17 Federated Farmers NZ FS11.65.17	Reject	My view is that the requested relief goes beyond the purpose of PC2, by proposing a change from 'promote' to 'require' in the methods for a One Plan Chapter that PC2 does not address. My view is that this request is out of scope.
Ngāti Turanga, Te Roopū Taiao o Ngāti Whakatere Trust, Te Rūnanga o Raukawa	67.2 68.2 70.2	Retain operative 5-8 (a) (i) (B) without change. Amend 5-8 in the manner annotated in Table 2	Forest & Bird FS1.67.2, FS1.68.2, FS1.70.2 Water Protection Society FS2.67.2, FS2.68.2, FS2.70.2	Federated Farmers NZ FS11.67.2.1, FS11.67.2.2, FS.67.2.3, FS11.67.2.4 FS11.68.2.1, FS11.68.2.2, FS11.68.2.3, FS11.68.2.4 FS11.70.2.1, FS11.70.2.2,	Accept in part	I propose to retain Policy 5-8 (a) (i) (B) but amend it to replace the requirement to 'achieve' the water quality strategies with 'contribute to achieving'. As discussed in Chapter 9.3 of this report, the N leaching limits were not and are not intended to be the sole means of achieving the water quality strategies in the One Plan.

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
				FS11.70.2.3, FS11.70.2.4		
Ballance Agre- Nutrients	72.1	Retain 5-8 as notified in PC2.		Forest & Bird 1.72.1	Accept in part	I propose amendments to Policy 5-8 that I consider are necessary to address issues raised in other submissions. However, I retain the intent of the RPS and Plan policies (the provision for exceptions).
Beef & Lamb NZ	74.1 74.2 74.6	Retain 5-8 and 5-8 (a) (i) (A) as proposed by PC2. Retain 5-8 (a) (iib) as proposed by PC2.		Forest & Bird 1.74.1, FS1.74.2, FS1.74.6 Federated Farmers NZ FS11.74.1, FS11.74.2, FS11.74.6 Horowhenua DC FS33.74.1, FS33.74.2, FS33.74.6	Accept in part	I propose amendments to Policy 5-8 that I consider are necessary to address issues raised in other submissions. However, I retain the intent of the RPS and Plan policies (the provision for exceptions).
	74.4	Adjust numbering as required pending changes to 5-8 (iia) and (iib).		Forest & Bird FS1.74.4 Federated Farmers NZ FS11.74.4 Horowhenua DC FS33.74.4	Accept in part	The numbering has been adjusted to accommodate insertions and amendments made to address other submission points.

Submitter	Sub No.	Summary of Requested Relief: Policy 5-8	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
	74.5	Amend 5-8 (a) (iia) (A) and (B), replacing 'good management principles' with 'good farming practice principles' and replacing (A) with: <u>(A) the feasibility, practicality, and cost of achieving the nitrogen leaching maximums specified in (i); and best practicable options towards achieving policies 5-1 and 5-2.</u> <u>(B) the Land Use Classification of the property and its relation to Table 14.2.</u>		Forest & Bird FS1.74.5 Horticulture NZ FS4.74.5 Federated Farmers NZ FS11.74.5 Horowhenua DC FS33.74.5	Reject	The Farm Systems experts have consistently referred to 'good management practices' (GMP) ad 'best management practices' (BMP) and have not raised concerns about this language. The alternative just makes the label longer. The expression 'GMP' does not preclude the inclusion within that expression of 'good farming practice principles' specified in industry codes or guidelines.

20 Requested Amendments to Policies 14-3, 14-5 and 14-6

20.1 Relief Requested

1. The amendments to Policies 14-3, 14-5 and 14-6 requested by submitters are detailed in the annotated version of PC2 contained in **Attachment E2** and are summarised in the following tables. The tables below also detail my recommendation in respect of each item of requested relief and explain my reasons for those recommendations.
2. I include in **Attachment M** a table detailing (in the left-hand column) the amendments I recommend to these policies to address the issues raised in submissions and (in the right-hand column) I comment on the rationale for the proposed amendments.
3. The table below addresses requested amendments to the publicly notified PC2 provisions. I discuss the requested amendments of submitters seeking exclusions or exceptions from the publicly notified PC2 provisions (e.g. for CVG, agriculture and WWTP land irrigation) in Chapters 11, 12 and 13 of this report. However, to provide a complete picture of the amendments I propose, I have incorporated in **Attachment P** the amendments I propose in Chapters 11 and 12 of this Report (providing two alternative controlled activity consent pathways based on the suggestions of Dairy NZ (S40), Federated Farmers NZ (S58) and the commercial vegetable growing submitters.
4. I recommend that the submission points listed below be **accepted** or **accepted in part** or **rejected** for the reasons explained in the 'Reasons' column below. I also recommend that the further submission points that support or oppose those submissions be accepted or rejected as detailed in the Table in **Attachment E1**:

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
Ravensdown	45.6	Retain Policy 14-3 as notified.		Forest & Bird FS1.45.6	Accept in part	I propose amendments to Policy 14-3 to address issues raised in other submissions. I have incorporated in the policy additional measures (in addition to GMP) for decreasing nitrogen leaching, with reference to the contribution these measures and GMP will have in improving water quality.
EDS Fish & Game	54.3 55.4	Reinstate pre-PC2 wording of 14-3.	Forest & Bird FS1.54.3, FS1.55.4 Water Protection Society FS2.54.3, FS2.55.4	Federated Farmers NZ FS11.54.3, FS11.55.4 DairyNZ FS9.55.4	Reject	I consider that the amendments I propose to address issues raised in other submissions are preferable to the One Plan text of Policy 14-3.
Federated Farmers NZ	58.6	Retain 14-3 (or adopt a definition based on <i>good farming practice</i>) and seeks consequential amendments to achieve a reasonable consenting pathway.	The first-round submissions of: Lisa & Paul Charmley S3.4 Ian Grant and Shirley Cumming S47.4 Sarah von Dodelszen S48.4	Forest & Bird FS1.58.6 Horowhenua DC FS24.58.6	Accept in part	The Farm Systems experts have consistently used the expression 'good management practice' in their joint witness statement and have raised no opposition to the use of this expression. The expression 'GMP' does not preclude inclusion of 'good

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
			Russell & Karen Phillips S52.4			farming practices' identified in industry codes or guidelines. I propose amendments addressing an alternative (controlled activity) consent pathway for agricultural IFLU activities elsewhere in this Section 42A Report.
Ngā Waihua o Paerangi Trust	63.9	Delete the proposed changes to 14-3 and retain the wording of the operative One Plan.	Forest & Bird FS1.63.9	Federated Farmers NZ FS11.63.9	Reject	I consider that the amendments I propose to address issues raised in other submissions are preferable to the One Plan text of Policy 14-3.
Water Protection Society	65.21	Supports general intent but requests amendment of 14-3: <i>"When making decisions on resource consent^ applications, and setting consent conditions, for activities affecting groundwater and surface water^ quality, the Regional Council must have regard to good management practices* <u>and additional measures for decreasing nitrogen leaching to</u> <u>and the extent to which that</u></i>	Forest & Bird FS1.65.21	Federated Farmers NZ FS11.65.21	Accept in part	I propose amendment of Policy 14-3 to reflect the first part of S65.21 (addressing GMP and additional measures). This is consistent with my recommendations contained in Chapter 9 (re water quality). I consider that amendments I propose in other chapters to Policies 5-8 and 14-6 already adequately address the relevant Chapter 5 water quality

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		<i>those good management practices* <u>and additional measures help give effect to Policies 5-1 to 5-8 address the matters in and</u> Policies 14-1, 14-2, 14-4, and 14-5 and 14-6."</i>				policies and have not included reference to specific policies.
Horticulture NZ	66.5	Retain 14-3, with consequential amendments shown in part D of HNZ submission (referencing HNZ's requested separate policy '14X' for CVG).	Chris Pescini FS6.66.5 Woodhaven Gardens FS8.66.5 Horowhenua DC FS26.66.5	Forest & Bird FS1.66.5 Water Protection Society FS2.66.5 DairyNZ FS9.66.5 Federated Farmers NZ FS11.66.5	Reject	I address in Chapter 12, Horticulture NZ's and other submitters' requests for a tailored approach for CVG. As detailed within that Chapter, I do not support a separate policy 14X. Rather, I have proposed amendments to policies 14-5 and 14-6 to address the particular challenges for CVG. Accordingly, there is no need for a reference to Policy 14X in Policy 14-3.
Beef & Lamb NZ	74.9	Amend 14-3: <u>When making decisions on resource consent^ applications, and setting consent conditions, for activities affecting groundwater and surface water^ quality, the Regional Council must have regard to good management practices*...to the extent that</u>		Forest & Bird FS1.74.9 Horowhenua DC FS33.74.9	Accept in part	As discussed in Chapters 9, 11 and 12, my view is that the GMPs and other measures adopted should achieve minimum N leaching reduction, and therefore tangible contribution to water quality improvement. The extent to which they contribute to water quality improvement should be a consideration. I expect it may be

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		<i>those <u>standards good management practices</u>* address the matters in Policies 14-1, 14-2, 14-4, and 14-5 and 14-6, <u>and contribute to meeting the targets contained in Schedule E.</u></i>				difficult to demonstrate the specific extent to which a single IFLU activity's N reduction will contribute to meeting all of the Schedule E water quality targets. Therefore, as a form of alternative relief, I propose to amend the wording suggested by S74.9 to refer to contributing to 'improving water quality in the relevant water management sub-zone'.
DairyNZ	40.5	Amend 14-5 as detailed in the Attachment to DairyNZ submission, including inserting a 30 June 2023 end date and the 90% baseline or 75 th percentile alternative approach.	Horticulture NZ FS4.40.5	Forest & Bird FS1.40.5 DOC FS3.40.5 EDS FS5.40.5 Beef & Lamb NZ FS14.40.5 Horowhenua DC FS29.40.5	Accept in part	For the reasons discussed in Chapter 11, I recommend the inclusion in PC2 of an alternative controlled activity consent pathway (adopting the core of the Dairy NZ and Federated Farmers NZ proposal). I do not support the June 2023 end date for the reasons discussed in Chapter 11.
Ravensdown	45.7	Retain Policy 14-5 as notified.		Forest & Bird FS1.45.7	Reject	I propose amendments to Policy 14-5 to address issues raised in other submissions.
Federated Farmers NZ	58.7	Amend Policy 14-5 as proposed in Attachment 1 to S58.	Horticulture NZ FS4.58.7	Forest & Bird FS1.58.7	Accept in part	For the reasons discussed in Chapter 11, I recommend the inclusion in PC2 of an alternative controlled activity

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
			The first-round submissions of: Lisa & Paul Charmley S3.5 Ian Grant and Shirley Cumming S47.5 Sarah von Dadelszen S48.5 Russell & Karen Phillips S52.5	DOC FS3.58.7 Beef & Lamb NZ FS14.58.7 Horowhenua DC FS24.58.7		consent pathway (adopting the core of the Dairy NZ and Federated Farmers NZ proposal). I do not support the June 2023 end date for the reasons discussed in Chapter 11.
Ngā Waihua o Paerangi Trust	63.10 63.11 63.12	Retain the clarification in 14-5 (b) (1) as proposed. Amend footnote [1] to read: <u><i>"The Plan has legal effect in the case of existing intensive farming land uses from the date of notification of the One Plan, in 2007."</i></u> Amend footnote [2] to read: <u><i>"The Plan has legal effect in the case of existing intensive farming land uses from the date"</i></u>	Forest & Bird FS1.63.10, FS1.63.11, FS1.63.12	Federated Farmers NZ FS11.63.11, FS11.63.12	Reject	PC2 does not propose any amendments to the date of legal effect. All PC2 (and my proposed amendments) seeks to do is set the established One Plan dates of legal effect out more clearly. The submitter's request attempts to extend the 'reach' of the Chapter 14 provisions to a time before the date the One Plan became operative (perhaps to capture more IFLU activities under the Chapter 14 framework for existing IFLU activities).

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		<u><i>of notification of the One Plan, in 2007."</i></u>				In my view, PC2 is not able to address this matter retrospectively and the request is beyond the scope of PC2.
Water Protection Society	65.23	Supports general intent but requests amendment of 14-5: <i>"(i) They are existing (ie., established prior to the Plan having legal effect) intensive farming land^ uses*, in the targeted Water Management Sub-zones*identified in Table 14.11.</i> <i>(ii) They are new (ie., established after the Plan has legal effect²) intensive farming land^ uses*, in all Water Management Sub-zones* in the Region.'</i> Also requests the deletion of the two footnotes.	Forest & Bird FS1.65.23	Federated Farmers NZ FS11.65.23	Reject	The submitter suggests (section 21 of S65) that the terms 'existing' and 'new' would be better defined in the One Plan glossary than in the footnotes. The submitter does not propose changing the meaning of the expressions. I also note that Federated Farmers (S58) and Dairy NZ (S40) requested shifting the clarification in the footnote into the text of the policy. My view is that there is benefit in having the clarification visible on the same page where the expressions are used. I recommend that the text of the policy itself is amended to clarify explicitly what the threshold date is to qualify as an 'existing' and 'new' IFLU activity. I do not support the requested deletion of the footnotes. They are established in the One Plan and PC2 did not seek

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						to amend the dates of legal effect they refer to. They are therefore retained.
	65.24	Requests addition of a further exception to Policy 14-5 (d): <i><u>"(d) Except as provided for in Policy 14-6(d) and Policy 14-6(e), Existing intensive farming land^ uses regulated in accordance with (b)(i) must be managed to ensure that the leaching of nitrogen from those land^ uses does not exceed the cumulative nitrogen leaching maximum* values for each year contained in Table 14.2."</u></i>	Forest & Bird FS1.65.24	Federated Farmers NZ FS11.65.24	Reject	Policy 14-6 (e) does not, itself, 'provide' for exceptions. Exceptions are provided for by Policy 14-6 (d). Policy 14-6 (e) sets out the matters that must be given regard when considering those exceptions. The amendments I recommend to Policy 14-6 do not alter the roles of parts (d) and (e) of Policy 14-6), and no change is therefore required.
	65.25	Replace 14-5 (f) with: <i><u>'(f) Intensive farming land^ uses regulated in accordance with (b) must exclude cattle from:</u></i> <i><u>(i) within 20m from the mean annual highest water level of a wetland^ or lake^ that is a rare habitat*, threatened habitat* or at-risk habitat*.</u></i>	Forest & Bird FS1.65.25	Federated Farmers NZ FS11.65.25	Reject	The <i>Resource Management (Stock Exclusion) Regulations 2020</i> were confirmed on 3 August 2020 and will come into effect on 3 September 2020. The regulations introduce new requirements for stock exclusion from rivers, lakes and natural wetlands. They will apply immediately (from 3 September 2020) to new pastoral farming activities. However, they will not apply to existing pastoral farming activities until 2023 or 2025

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		<u>(ii) within 5m of the bed[^] of any river[^] that is permanently flowing</u> <u>(iii) within 5m of the active bed[^] of any river that is intermittently flowing and that has an active bed* width greater than 1 metre</u> <u>(iv) within 2.5m of the centreline of any other watercourse.</u>				(depending on the water body and the stock type). When they take effect, the Regulations will require a 3-metre setback from rivers and lakes. Regulation 19 provides that a regional plan may contain a rule that is more stringent than the Regulations. The submitter proposes restrictions that in some respects are more restrictive than the Regulations (e.g. applying to all cattle immediately, the 5m, not 3m, setback from rivers and the 20m setback from some wetlands). PC2 did not set out to revisit the One Plan provisions relating to stock exclusion. I understand that Horizons is undertaking a review of the One Plan provisions, with a view to incorporating the Regulations as required by the RMA. In this respect, my view is that the submitter's request is premature and goes beyond the scope of PC2. I do not support the requested amendments.
Ngāti Turanga, Te Roopū Taiao o Ngāti	67.6 68.6	Delete the new footnote to Policy 14-5 (b) (i).	Forest & Bird FS1.67.6, FS1.68.6, FS1.70.6		Reject	The footnotes are important in understanding the policy. They are also established in the One Plan and PC2 did not seek to amend the dates

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Whakatere Trust, Te Rūnanga o Raukawa	70.6		Water Protection Society FS2.67.6, FS2.68.6, FS2.70.6			of legal effect they refer to. I do not support the requested deletion.
Ballance Agri-Nutrients	72.3	Retain 14-5 as notified.		Forest & Bird FS1.72.3	Reject	I propose amendments to Policy 14-5 to address issues raised in other submissions.
Kahungunu ki Tāmaki nui a Rua Trust	4.3	Reinstate original wording of (b) <i>'Where an exception is made...riparian planted zones'</i> .	Forest & Bird FS1.4.3 Water Protection Society FS2.4.3		Accept in part	The request erodes the intention of PC2 by seeking to restore the limited exceptions that apply in the operative One Plan. As discussed in Chapter 2, the Policy 14-6 (b) exceptions are illusory – because of the 'catch-22' requirement of Policy 14-5 (e) that requires IFLU activities to meet the Table 14.2 limits. This is the very problem that PC2 is seeking to correct. As discussed in Chapter 9, I propose other amendments to make the scope of potential N leaching clearer and more explicit. I also recommend replacing the expression 'ensure' in Policy 14-6 (b) with 'require' to make explicit the

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						expectation that the consent authority will require GMP and additional measures.
	4.4	Amend 14-6 (d) (i): <i><u>"Good management practices* are implemented in accordance with a nutrient management plan*, along with additional innovations timelines, targets and measures to further progressively reduce nutrient leaching and run-off, faecal contamination and sediment losses from the land^ progressively over time."</u></i>	Forest & Bird FS1.4.4 Water Protection Society FS2.4.4		Accept in part	As discussed in Chapters 9 to 12, I agree that the PC2 provisions should be made more specific with respect to N leaching loss and timeframes for achieving N leaching loss reduction. I recommend a suite of amendments to, both, provide for alternative controlled activity consent pathways and specify the N leaching loss limits able to be authorised under those. My expectation is that the controlled activity consent pathway will be more attractive to IFLU activities and therefore the number of exceedances (and quantum of N leaching exceedance) will be better constrained than under PC2.
	4.5	Provide clear linkages between Policy 14-6 and the relevant Schedule B values.	Forest & Bird FS1.4.5		Agree in part	I agree that reference to the relevant values of the Water Management Sub-zone is appropriate. The RMA Planners agreed (20.08.20 JWS) that

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			Water Protection Society FS2.4.5			the relevant values include the values in Schedule B and the values identified in Treaty Settlement Agreements.
Dairy NZ Federated Farmers NZ	40.6 58.9	Amend 14-6 as annotated in Table 1 of Attachment [X], including: Amendments to (c) re cattle exclusion: retain original wording (delete 'must be'); and the amendments detailed in Chapter 11.	Horticulture NZ FS4.40.6, FS4.58.9 Beef & Lamb NZ FS14.40.6, FS14.58.9 The first-round submissions of: Lisa & Paul Charmley S3.6 Ian Grant and Shirley Cumming S47.6 Sarah von Dadelszen S48.6 Russell & Karen Phillips S52.6	Forest & Bird FS1.40.6, FS1.58.9 Horowhenua DC FS29.40.6, FS24.58.9	Accept in part	For the reasons explained in Chapter 11, I propose insertion of new exceptions under Policy 14-5 to address alternatives proposed by Dairy NZ (and others) and Hort NZ. I also propose additions and amendments to the policy considerations that should apply to those exceptions in Policy 14-6 (e), so as to address the matters raised in these submissions and in other submissions. I agree with the concerns about the PC2 wording change to Policy 14-6 (c). The wording doesn't really make sense with 'must be' inserted as proposed by PC2. I do not agree that inserting 'must be' into the policy lifts the bar (because what is required is 'avoid, remedy, or mitigate – not

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						'avoid'). However, in my opinion, the second sentence is where the requirements for avoidance, remediation or mitigation should be made clear. I consider that the amendments requested by the Water Protection Society (S65.27) are more appropriate in this respect. I recommend that clause (c) be amended to largely adopt the S65.27 suggestions.
Ravensdown	45.8	Amend 14-6(e): (i) <u>Whether the proposed innovations and measures represent the best practicable option to will minimise the nutrient leaching and run-off, faecal contamination and sediment losses from the land[^], having particular regard to:</u> (A) <u>The extent of the exceedance of the cumulative nitrogen leaching maximum*</u>		Forest & Bird FS1.45.8 Federated Farmers NZ FS11.45.8	Accept in part	I recommend multiple amendments to Policy 14-6 (e). My view is that consideration of 'best practicable option' is reasonable, alongside the other matters included in the recommended revised list of 14-6 (e) considerations. These matters range (inter alia) from a more particularised BPO, to proportionality, consent duration, potential effects, the surface water values for the relevant Water Management Sub-zone (as a consequence of the RMA Planning

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		<u>in Table 14.2:</u> <u>(B) The rate of reduction of nitrogen loss towards the cumulative nitrogen leaching maximum* for any given year in Table 14.2:</u> <u>(C) Whether further reductions are currently possible for the intensive farming land[^] use based on existing technologies.</u> <u>(ii) The extent to which the non-compliance with the cumulative nitrogen leaching maximum* specified in Table 14.2 is attributable to updates in versions of OVERSEER;</u> <u>(ii)(iii) The nature and characteristics</u>				expert conferencing), domestic food supply recognition of the off-site mitigation measures. I agree with S45.8 that the focus should be on absolute N leaching and achievable mitigation measures, rather than only the extent of exceedance. I consider that it is relevant to consider the impact of future Overseer version changes and do not agree that (e) (ii) should be deleted as proposed by S45.8.
EDS	54.4	Delete 14-6 (d) (i) and (e) and insert ' <i>as a minimum</i> ' at the end of (b).	Forest & Bird FS1.54.4 Water Protection Society FS2.54.4	Federated Farmers NZ FS11.54.4	Accept in part	I do not support deletion of the exception provided for in Policy 14-6 (d) (i), for the reasons explained in Chapter 7. The policy is seeking to revert back to the narrow operative

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						One Plan approach, which is the very issue PC2 seeks to address. See my comments in respect of submission 4.3 above. I propose amendments to the PC2 policies, including Policy 14-6, to address the matters discussed in Chapters 9 to 12. In (b), I recommend alternative relief that will achieve the same outcome as insertion of 'as a minimum'.
Fish & Game	55.5	Delete 14-6 (d) (i) and (e) and insert ' <i>as a minimum</i> ' at the end of (b). If sub-clause (c) is retained, insert " <i>farm system modelling, optimisation and marginal cost-marginal benefit analysis that determines the range of leaching reductions that are available</i> ". Clarify the role of (f) (iii) in the hierarchy.	Forest & Bird FS1.55.5 Water Protection Society FS2.55.5	Horticulture NZ FS2.55.5 DairyNZ FS9.55.5 Federated Farmers NZ FS11.55.5	Accept in part	I do not support deletion of the exception provided for in Policy 14-6 (d) (i), for the reasons explained in Chapter 7. The policy is seeking to revert to the narrow operative One Plan approach, which is the very issue PC2 seeks to address. See my comments in respect of submission 4.3 above. I propose amendments to the PC2 policies, including Policy 14-6, to address the matters discussed in Chapters 9 to 12. In (b), I recommend alternative relief that will

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						achieve the same outcome as insertion of 'as a minimum'. In my view the reference to sub-clause (c) is meant to be reference to what was 14-6 (e) (1) (C). If that is the case, I support the amendment because it is consistent with the intention of PC2 to enable the use of a range of farm system modelling tools.
Director General of Conservation	61.4	Amend 14-6(b): <i><u>"ensure implementation of good management practices to manage-minimise nutrient leaching and run-off, faecal contamination and sediment loss, as part of any intensive farming land use."</u></i>	Forest & Bird FS1.61.4 Water Protection Society FS2.61.4 Public Health Services FS15.61.4		Accept	For the reasons explained in Chapter 9, I agree that the focus should be on minimising (not just managing) N leaching loss and other contaminants.
	61.5	Amend 14-6 (d) (i) to identify what percentage or quantum of reduction is to be considered appropriate and identify	Forest & Bird FS1.61.5		Accept in part	For the reasons explained in Chapter 9, I agree that PC2 could be clearer about the acceptable range of N leaching loss required as part of the

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		timeframe in which to achieve reductions.	Water Protection Society FS2.61.5 Public Health Services FS15.61.5			policy and rule framework. However, I recommend doing this by providing for alternative controlled activity consent pathways and firming up the policies applicable to exceedances of those (in Policy 14-6 (e)).
	61.6	Delete 14-6 (d) (ii) or identify the mechanism by which the IFLU will be discontinued or that a future consent would be declined.	Forest & Bird FS1.61.6 Water Protection Society FS2.61.6 Public Health Services FS15.61.6		Accept	I propose an amendment to Policy 14-6 (f) (iii) to prevent the IFLU activity from being resumed.
	61.7 61.11	Amend 14-6 (e) to provide better direction on how these matters make an IFLU activity appropriate and show a link to reduced nutrient leaching and delete (iv).	Forest & Bird FS1.61.7, FS1.61.11 Water Protection Society FS2.61.7, FS2.61.11 Public Health Services FS15.61.7	DairyNZ FS9.61.7 Federated Farmers NZ FS11.61.11	Accept in part	For the reasons explained in Chapter 9, I recommend a suite of amendments to Policy 14-6 (e) that in my view address the concern raised by S61.7 and S61.11.

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	61.8	Delete 14-6 (f) or include process steps for implementation of this policy.	Forest & Bird FS1.61.8 Water Protection Society FS2.61.8 Public Health Services FS15.61.8		Accept in part	My view is that Policy 14-6 (f) is necessary to facilitate land use change where necessary. The requirements are set out in sub-clauses (i) to (iii). I agree that (iii) could be firmed up by inserting 'to ensure'. Also, I do not consider that the word 'enforceability' is appropriate. Enforcement is a matter separate from the policy framework of the One Plan and should be a consideration inherent in imposing any requirements through conditions of resource consent. I have recommended a number of amendments to Policy 14-6 (f) to better address duration, and the requirements of 'transition'.
	61.13	Amend to provide greater direction on what level of GMP is required and what circumstances may trigger a higher level of management and the level of reduction of	Forest & Bird FS1.61.13 Water Protection Society FS2.61.13		Accept in part	For the reasons explained in Chapter 9, I agree that PC2 could be clearer about the acceptable range of N leaching loss required as part of the policy and rule framework. I recommend doing this by providing

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		nutrients required over what timeframe.	Public Health Services FS15.61.13			for alternative controlled activity consent pathways and firming up the policies applicable to exceedances of those (in Policy 14-6 (e)).
	61.14	Clarify how Horizons would implement, monitor, and enforce a policy that directs an IFLU to continue for no longer than five years.	Forest & Bird FS1.61.14 Water Protection Society FS2.61.14 Public Health Services FS15.61.14		Accept in part	I agree that (iii) could be firmed up by inserting 'to ensure'. Also, I do not consider that the word 'enforceability' is appropriate. Enforcement is a matter separate from the policy framework of the One Plan and should be a consideration inherent in imposing any requirements through conditions of resource consent. See my discussion of these matters for submission 61.8 above.
Ngā Waihua o Paerangi Trust	63.13	Retain the existing wording of 14-6 in the operative One Plan.	Forest & Bird FS1.63.13		Accept in part	I do not support retention of the One Plan wording of Policy 14-6 (d) (i), for the reasons explained in Chapter 7. I propose amendments to the PC2 policies, including Policy 14-6, to address the matters discussed in Chapters 9 to 12.

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	63.14	Amend 14-6: <u>"Ensure implementation of good management practices* to manage nutrient leaching run-off, faecal contamination and sediment loss, as part of any intensive farming land use."</u>	Forest & Bird FS1.63.14		Reject	The expression 'leaching' is at the heart of the One Plan provisions and should be retained (along with nutrient run-off). I do not support the requested deletion.
	63.15	Retain 14-6 (b) (do not delete it as proposed by PC2) and new clause after (a): <u>"(aa) Resource consent applications for farms to exceed the nitrogen leaching maximum must not be granted, unless they meet the criteria in (b) and are managed in accordance with (e)."</u>	Forest & Bird FS1.63.15	Manawātū FC FS7.63.15 Federated Farmers NZ FS11.63.15	Accept in part	The request erodes the intention of PC2 by seeking to restore the limited exceptions that apply in the operative One Plan. It appears to go further by suggesting some exceedances of Table 14.2 would be prohibited. This is not the intention of the One Plan as I understand it. This point was noted in the decision of <i>Horowhenua District Council v Manawatu-Wanganui Regional Council</i> [2018] NZEnvC 163 where the Environment Court explicitly recorded that exceedance of Table 14.2 was not a prohibited

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						activity (although it could have been) in the One Plan. However, I have recommended changes to be clearer about the acceptable range of N leaching loss required as part of the policy and rule framework, including with some additional controlled activity limits for IFLUs.
	63.16	Retain 14-6 (c) (do not amend as proposed by PC2)	Forest & Bird FS1.63.17	Federated Farmers NZ FS11.63.17	Accept in part	For reasons explained earlier in this Table, I recommend other amendments to Policy 14-6 (c).
	63.17	Delete 14-6 (d) (i) and retain (d) (ii).	Forest & Bird FS1.63.16	Federated Farmers NZ FS11.63.16	Accept in part	I recommend the retention of 14-6 (d) (ii) with amendment. I do not support deletion of the exception proposed by PC2 in Policy 14-6 (d) (i). As discussed in Chapter 2, the Policy 14-6 (b) exceptions are illusory – because of the ‘catch-22’ requirement of Policy 14-5 (e) that requires IFLU activities to meet the Table 14.2 limits. This is a very narrow (effectively impossible) pathway, which is the very problem that PC2 is seeking to correct. As discussed in

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						Chapter 9, I propose other amendments to make the scope of potential N leaching more explicit. I also recommend replacing the expression 'ensure' in Policy 14-6 (b) with 'require' to make explicit the expectation that the consent authority will require GMP and additional measures.
	63.18	Delete 14-6 (e) or reword so that it is consistent with achieving the water quality objective of the One Plan.	Forest & Bird FS1.63.18	Federated Farmers NZ FS11.63.18	Accept in part	For the reasons discussed in Chapter 9, I propose other amendments to make the scope of potential N leaching more explicit. I also recommend replacing the expression 'ensure' in Policy 14-6 (b) with 'require' to make explicit the expectation that the consent authority will require GMPs and additional measures.
	63.19	Delete 14-6 (f).	Forest & Bird FS1.63.19	Federated Farmers NZ FS11.63.19	Reject	My view is that Policy 14-6 (f) is necessary to facilitate land use change where necessary. For the reasons explained earlier in this Table, I recommend the amendments

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						to Policy 14-6 (f) shown in Attachment [X]
Water Protection Society	65.26	Supports the intent but requests deletion of " <u>as part of any intensive land use...</u> " from Policy 14-6 (b).	Forest & Bird FS1.65.26		Reject	I agree that the wording is somewhat clumsy, however it is important to retain the clarification that the policy pertains to all IFLU activities.
	65.27	Amend 14-6 (c) re cattle exclusion: <u>"(c) Ensure that cattle are excluded from surface water in accordance with Policy 14-5 (f) and (g) except where landscape or geographical constraints make stock exclusion impractical. and the effects of cattle stock movements are must be avoided, remedied or mitigated. In all such cases, the effects of any unavoidable losses of nitrogen, phosphorus, faecal contamination matter and sediment are must be avoided, remedied or mitigated by other</u>	Forest & Bird FS1.65.27	Federated Farmers NZ FS11.65.27	Accept in part	I consider that the amendments suggested by S65.27 would improve the clarity of the policy. I recommend adoption of those requested changes, with some minor editorial amendment. I do not support deletion of 'environmental compensation'. In some circumstances, it may be an appropriate response to unavoidable contamination.

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		works or environmental compensation.				
	65.28	Replace 14-6(d)(i) with: <u>“(d) Provide for exceptions to (a), for a period of 5 years, for existing intensive farming land uses that exceed the cumulative nitrogen leaching maximums where:</u> <u>(i) Good management practices* are being progressively implemented in accordance with a nutrient management plan*, along with additional innovations and measures to further reduce nutrient leaching and run-off, faecal contamination and sediment losses from the land[^] progressively over time; or...</u>”	Forest & Bird FS1.65.28	Federated Farmers NZ FS11.65.28	Accept in part	I do not support placing the time limit requested in 14-6 (d) as requested. As discussed in Chapters 9 to 12, I consider there are three aspects of timeliness that need to be addressed (the time within which applications for consent should be lodged, the time within which N leaching reduction should be achieved and consent duration). I recommend amendments to Policy 14-6 addressing all of these aspects of timeliness.
	65.29	Supports insertion of 14-6 (d) (ii) (five year limit).	Forest & Bird FS1.65.29	Federated Farmers NZ FS11.65.29	Accept	I agree that the five-year period provided for transition is reasonable.

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	65.30 65.31 65.35	Add the following clause to Policy 14-6 and renumber following sub-clauses: <u>“(e) Provide for exceptions to (a), for a period of 10 years, for existing intensive farming land uses that do not comply with the cumulative nitrogen leaching maximums even with implementation of good management practices where:</u> <u>(i) additional innovations and measures to further reduce nutrient leaching and run-off, faecal contamination and sediment losses from the land^ are implemented progressively over time.”</u>	Forest & Bird FS1.65.30, FS1.65.31, FS1.65.35	Federated Farmers NZ FS11.65.30	Accept in part	I do not support placing the time limit requested in 14-6 (d) as requested. As discussed in Chapters 9 to 12, I consider there are three aspects of timeliness that need to be addressed (the time within which applications for consent should be lodged, the time within which N leaching reduction should be achieved and consent duration). I recommend amendments to Policy 14-6 addressing all of these aspects of timeliness.
	65.32	Insert new 14-6 (f): <u>‘(f) When determining the timeframe (not to exceed 10 years) for an existing intensive farm land use to continue to exceed the nitrogen leaching maximums established under Policies 5-8(a) (as provided for by the exceptions described in</u>	Forest & Bird FS1.65.32		Accept in part	I do not support placing the time limit requested in 14-6 (d) as requested. As discussed in Chapters 9 to 12, I consider there are three aspects of timeliness that need to be addressed (the time within which applications for consent should be lodged, the time within which N leaching reduction

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		<u>by Policies 14-5(d), 14-6(d)(i) and 14-6(e)) have regard to :'</u>				should be achieved and consent duration). I recommend amendments to Policy 14-6 addressing all of these aspects of timeliness.
	65.33	In 14-6 (e) (i) to (v), replace 'strategy' with 'goal'.	Forest & Bird FS1.65.33		Reject	The One Plan refers to 'strategies' (e.g. in Policies 5-7 and 5-9). It does seem odd that the One Plan does not simply refer to objectives and policies, and does not define 'strategy', but I recommend sticking to the language already adopted in the RPS section of the One Plan.
	65.34	Add to 14-6 (e): <u>"(vi) The nature, sequencing, measurability and enforceability of any steps proposed to decrease the leaching to below the minimums established under Policy 5-8(a)."</u>	Forest & Bird FS1.65.34		Accept in part	This is addressed in Policy 14-6 (d) (i) where I have recommended amendments to make it clearer that the GMP and additional measures must specify timelines and N leaching targets.
	65.36	Supports insertion of 14-6 (f).	Forest & Bird FS1.65.36		Accepted in part	I have recommended amendments of (f) to address issues raised by S65 and other submissions, although

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						acknowledge the support for the provision for transition of IFLU activities in this submissions.
	65.37	Add to 14-6: <u><i>“(h) Not permit any intensive farming land use to continue to exceed the nitrogen leaching maximums for more than 10 years.”</i></u>	Forest & Bird FS1.65.37	Federated Farmers NZ FS11.65.37	Accept in part	I do not support the time limit being placed in 14-6 (h) as requested. As discussed in Chapters 9 to 12, I consider there are three aspects of timeliness/duration that need to be addressed ((a) the time within which applications for consent should be lodged, (b) the time within which N leaching reduction should be achieved and (c) consent duration). I made recommendations as to key milestones for lodgement and achievement of mitigation with regard to controlled activities under 14-5(d). I address consent duration for discretionary activities in my recommended amendments to Policy 14-6 (e) (vii). This could be strengthened by specifying there is a maximum limit of ten years, aligned with the approach of the NES-FM

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
						2020 (Regulation 24: consent term must expire before 1 January 2031).
Ngāti Turanga, Te Roopū Taiao o Ngāti Whakatere Trust, Te Rūnanga o Raukawa	67.7 68.7 70.7	In 14-6 (b), replace 'manage' with 'minimise'. Insert into 14-6 (d) the requirement to 'not exceed the cumulative nitrogen leaching maximum* for Year-20 in Table 14.2'. In 14-6 (d) (ii), insert absolute limit of 31 December 2025 (whichever comes first). In (14-6 (e) (i), clarify 'innovations and measures'. In 14-6 (e) (i), the wording 'having particular regard to'	Forest & Bird FS1.67.7, FS1.68.7, FS1.70.7 Water Protection Society FS2.67.7, FS2.68.7, FS2.70.7	Federated Farmers NZ FS11.67.7, FS11.68.7, FS11.70.7	Accept in part	The submissions raise valid concerns about the level of stringency in the PC2 framework. For the reasons explained in Chapters 9 to 12, I recommend a suite of amendments to Policy 14-6, some of which address the matters raised in these submissions. I note that an absolute limit of 31.12.25 is similar to the five-year limit already specified in (d) (ii). I also recommend amendments to Policy 14-6 (f) to ensure the IFLU activity permanently ceases, where transition is proposed. I have deleted reference to innovations and clarified that measures involve mitigation. I do not agree that the 'particular regard to' in 14-6 (e) (i) (now (iii)) creates an

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		creates an inappropriate hierarchy of considerations. In 14-6 (e) (i) (A), consideration of the extent of exceedance is unhelpful. In 14-6 (e) (i) (B), include both quantity and rate of reduction. Amend 14-6 (e) (i) (C) to clarify that it is further reductions in nutrient leaching. In 14-6 (e), insert 'particular' regard. In 14-6 (e) (iv), insert 'demonstrated' improvement of water quality. Insert a new 14-6 (e) (vi) to address effects on wetlands or lakes that are rare or threatened habitats.				inappropriate hierarchy. It is wordy, but my view is that it will work. I have provided some more guidance around the extent of exceedance in (e)(i). Both quantum and the rate of reduction, as well as proportion of cumulative contribution, are also considered in my recommended amendments to Policy 14-6 (e). I do not agree that it is necessary to include reference to 'demonstrated' improvement of water quality. I recommend including consideration of potential effects on surface water and ground water receiving environments (as agreed at the RMA Planning expert conference on 20 August 2020 in response to Question 11). For transitioning IFLU activities, considered under (14-6 (f), I do not

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		In 14-6 (f) (i), replace 'do not increase' with 'significantly decrease'. In 14-6 (f) (ii), insert reference to 'adverse effects caused by' and amend to specify the programme of de-intensification committed to and the absolute limit of 31 December 2025.				consider it is appropriate to require a significant decrease, provided N loss does not increase and the time for transition is strictly limited. The five-year limit proposed in 14-6 (f) is appropriate in my view to allow transition.
Ballance Agri Nutrients	72.4	Add new clauses (g) and (h) to 14-6: <u>“(g) Provide for exceptions to (a) for new intensive farming land^ uses that exceed the cumulative nitrogen leaching maximum*, where:</u> <u>(i) Good management practices* are implemented in accordance with a nutrient management plan*, along with</u>		Forest & Bird FS1.72.4 Federated Farmers NZFS11.72.4	Reject	PC2 intentionally addresses the policy settings for <i>existing</i> IFLU only. I understand that, at the time PC2 was developed, Horizons anticipated that the review of the NES-FM would potentially address <i>new</i> IFLU activities through restrictions on intensification. The 2020 NPS-FM does include some restrictions on pastoral farming intensification, which prevail until 2025. I understand that Horizons is revisiting the One Plan in light of the NES-FM with a view to

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		<u>additional innovations and measures to further reduce nutrient leaching and run-off, faecal contamination and sediment losses from the land^ progressively over time.</u> <u>(h) When considering an application for resource consent under (g), have regard to:</u> <u>(i) The extent to which the non-compliance with the cumulative nitrogen leaching maximum* specified in Table 14.2 is attributable to updates in versions of OVERSEER;”</u>				ensuring that any ‘duplication or conflict’ between the rules of the plan and the NES is addressed. Unless or until that occurs (and in any event), an NES ‘prevails over’ rules in a plan in the event of conflict (unless the One Plan is more stringent, which then applies). I hope to be able to report further to the Hearing Panel on these matters closer to the time of the hearing. My view is that tinkering with the provisions for new IFLU activities, through PC2, would be premature, particularly where there may be policies which require amendment, not just rules.
Beef & Lamb NZ	74.10	Amend Policy 14-6 (b): <u>“(b) Ensure implementation of good management practices good farming practice principles* to manage nutrient leaching and run-off, faecal</u>		Forest & Bird FS1.74.10, Federated Farmers NZ FS11.74.10	Accept in part	I discuss in Chapter 16 the different expressions submitters have requested for ‘GMPs’. My recommendation is to retain the language ‘GMP’ (consistent with the term used by the Farm Systems

Submitter	Sub No.	Summary of Requested Relief: Policy 14-3	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	S.42A Recommendation	Reasons
		<u>contamination and sediment loss, as part of any intensive farming land^ use, consistent with Objectives 5-1 and 5-2, and Schedule E."</u>		Horowhenua DC FS33.74.10,		experts in their joint witness statements dated 20 and 21 July 2020 and 12 August 2020). The Chapter 5 water quality policies are already referenced in PC2 Policy 14-6 (e) (v) (now (x)). I also recommend insertion in 14-6 (vi) reference to the targets in Schedule E. I do not consider it is necessary to also reference Objectives 5-1 and 5-2, either in (b) or (e).
	74.13	Amend 14-6 (e) and (f) to also consider LUC.		Forest & Bird FS1.74.13 Federated Farmers NZ FS11.74.13 Horowhenua DC FS33.74.13	Accept in part	Policy 14-6 (e) (v) considers physical characteristics, climate and soil properties. There would be some duplication in inserting LUC but I recommend it for completeness. I do not consider it is necessary to reference it in 14-6 (f) because the limitations of LUC will lie behind the necessity to transition out of IFLU.

21 Requested Changes to PC2 Rules 14-1, 14-2 and 14-2A and Definitions

21.1 Relief Requested

1. The amendments to PC2 rules requested by submitters are summarised in the table below. They are very detailed and do not group naturally into similar themes. For that reason, I have addressed each submission point individually in the table.

21.2 Discussion: Non-Complying Activity and Prohibited Activity Default Activity Status

2. Some submission points (S54.7, S55.8, S63.30) request non-complying activity or prohibited activity status for IFLU activities that exceed the N leaching limits provided for by the controlled activity pathway. For the reasons explained in Chapter 7 of this report, I do not support either non-complying or prohibited activity status. In my opinion, with the refinements I recommend, the One Plan, the Chapter 14 policy framework will provide greater guidance on the matters that should be considered in determining whether to grant consent and when imposing conditions. I also consider that decision makers will be better placed to refuse to consent a proposal, or to restrict a proposal, where it considered appropriate to do so under the policy framework.

21.3 Discussion: Retention of Operative One Plan Provisions Without Change

3. Submitters who oppose PC2 (S63, S67, S68, S70) have requested retention or reinstatement of the operative One Plan rules. I do not support that request. In my opinion amendments to the PC2 policies and rules can be made, and are necessary, to address the issues they and others raise in their submissions.

21.4 Discussion: Limited Consent Duration

4. Submission points S4.8 and S55.8 request clearly-stated and limited durations for any exceedances of the specified N leaching limits in Table 14.2. Submission point S55.8 requests either a 5-year or 10-year maximum consent duration. I discuss in Chapter 6 of this report the concerns of the Water Protection Society (S65) and others about consent duration and their request to insert a maximum ten-year limit into Policy 14-6. I support that request and the wording I propose is set out in the recommended amendments I have made to Policy 14-6 in Chapter 20. My view is that such a significant matter should be addressed in the relevant policy (Policy 14-6), rather than through the rules.

21.5 Discussion: Public Notification

5. Submitters S54 and S55 request that all applications under Rule 14-2 and 14-2A (for restricted discretionary and discretionary activity consents) are publicly notified. I do not consider that this is necessary. The threshold for notification (currently) under section 95D of the RMA is that the effects of the proposal must be more than 'minor'. I anticipate that it will be difficult for an application that proposes to contribute N leaching in excess of the controlled activity limits to demonstrate it will have minor effects on water quality, unless the degree of exceedance is minor relative to that limit. My view is that the usual disciplines of Part 6 of the RMA are sufficient and appropriate to determine whether and which applications should be publicly or limited notified. I note that PC2 proposes that all applications under Rule 14-1 (for controlled activity consent) be non-notified. I support that approach.

21.6 Discussion: Amend Rules for New IFLU Activities

6. Federated Farmers NZ (S58.8, S58.15 and S58.17) has requested, if there is scope, that amendments also be made to the provisions relating to new IFLU activities to achieve the same or similar regulatory framework as for existing IFLU. There is no scope in my view. PC2 expressly does not seek to alter the consent pathways for new IFLU activities. I have previously provided by views as to scope when considering the request for new CVG IFLU.

21.6 Table Addressing Specific Submission Points

22. See overleaf.

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
Kahungunu ki Tāmaki nui-a-Rua Trust	4.8	Consider non-complying activity status for IFLU activities that exceed the Table 14.2 limits, and require a stage improvement in water quality, with clear timelines.	Forest & Bird FS1.4.8 Water Protection Society FS2.4.8	Manawatū DC FS7.4.8 Federated Farmers NZ FS11.4.8	Accept in part	For the reasons explained in Chapter 7, I do not support non-complying activity status. However, I recommend a suite of amendments to the policies and rules to address the other concerns of S4.8, including direction on clear time lines.
Dairy NZ Federated Farmers NZ	40 58 58.13 58.14 58.16	The amendments requested by S40 and S58 are addressed in Chapter 11	First-round submissions S3.9, S47.9, S48.9, S52. Horticulture NZ (FS4.58.13, FS4.58.14, FS4.58.16)	As detailed in Chapter 11 Forest & Bird (FS1.58.13, FS1.58.14, FS1.58.16) EDS (FS5.58.13, FS5.58.14) Beef & Lamb NZ (FS14.58.13, FS14.58.14) Horowhenua DC (FS24.58.13, FS24.58.14, FS24.58.16) Water Protection Society (FS2.58.16)	Accept in part	See Chapter 11. I have accepted some of the relief sought by S40 and S58 but also amended those suggestions.

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
Ravensdown	45.10 45.11 45.12	Retain Rule 14-1 as notified. Retain Rule 14-2 as notified. Retain Rule 14-2A as notified.		Forest & Bird FS1.45.10, FS1.45.11, FS1.45.12	Accept in part	I have recommended a suite of amendments to the rules to address issues raised in other submissions.
EDS Fish & Game	54.5 55.6	Rule 14-1: Revert sub-clause (b) in Matters of Control to pre-PC2 wording. Amend sub-clause (i) Matters of Control to read: <u>"the matters in Objectives and Policies, particularly those in Chapter 5 and Chapter 14."</u>	Forest & Bird FS1.54.5, FS1.55.6 Water Protection Society FS2.54.5, FS2.55.6 DOC FS3.54.5	Federated Farmers NZ FS11.54.5, FS11.55.6 Horticulture NZ FS4.55.6 DairyNZ FS9.55.6	Reject	The wording of (b) would be superseded by other amendments I propose to Rule 14-1 to address issues raised in S54 and other submissions. For a controlled activity, my opinion is that it is appropriate to confine the policy references to the Chapter 14 policies. In any event, I recommend inserting reference to the Chapter 5 policies in Policy 14-6 (e) which has the same effect as the requested relief.
EDS Fish & Game	54.6 55.7	Amend Rule 14-2 to read <u>"Existing intensive farming land use activities not complying with any of the conditions, standards and terms (a), (b) and (d) to (i) of Rule 14-1"</u> , Amend sub-clause (b) in Matters of Discretion to pre-PPC2 to read <u>"...measures, including good management practices..."</u>	Forest & Bird FS1.54.6, FS1.55.7 Water Protection Society FS2.54.6, FS2.55.7 DOC FS3.54.6	Federated Farmers NZ FS11.54.6, FS11.55.7 Horticulture NZ FS4.55.7 DairyNZ FS9.55.7	Accept in part	S54.6 and S55.7 make a valid point about the amendment required to the rule title and I have inserted (j) as a consequence (noting that there are actually (d) to (j) conditions). I accept that matter of control (c) should accommodate other practices other than GMP. I support retention of the reference to GMPs, but also propose inserting BMP and additional measures (following the recommendations of Associate Professor Horne) where necessary, to make the rule framework more robust. This will go some way to responding to the concerns of submitters about the lack of clarity in the rule framework.

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
		Amend sub-clause (I) in Matters of Discretion to read <u>"the matters in Objectives and Policies, particularly those in Chapter 5 and Chapter 14."</u>				I recommend inserting reference to the Chapter 5 policies in Policy 14-6 (e) which has the same effect as the requested relief.
	54.7	Provide for intensive farming land use activities not complying with condition, standard and term (c) of Rule 14-1 as non-complying activities. Include a requirement for there to be public notification of the consent.	Forest & Bird FS1.54.7 Water Protection Society FS2.54.7 DOC FS3.54.7	Federated Farmers NZ FS11.54.7	Reject	For the reasons explained in Chapter 7, I do not support non-complying activity status. I am also of the view that the usual requirements of Part 6 of the RMA are sufficient in relation to notification/non-notification decisions.
Fish & Game	55.8	Rule 14-2A: Amend intensive farming land use activities not complying with condition, standard, term (c) of Rule 1.1 to be non-complying. Include a requirement for there to be public notification of the consent. Incorporate the parent policy limit of 5 years on consent granted under this rule, or a maximum 10 year limit.	Forest & Bird FS1.55.8 Water Protection Society FS2.55.8	Manawatū DC FS7.55.8 DairyNZ FS9.55.8 Federated Farmers NZ FS11.55.8 Potatoes NZ FS12.55.8	Accept in part	For the reasons explained in Chapter 7, I do not support non-complying activity status. In my opinion the usual requirements of Part 6 of the RMA are sufficient in relation to notification/non-notification decisions. Acknowledging that there may be considerably more rigorous requirements for water quality required as part of future Plan changes to address the NPS-FM 2020I am of the opinion that the suggested 10-year limit would be reasonable. I note that I have placed this timeframe in Policy 14-6, not the rules, consistent with the One Plan's approach (e.g. duration is addressed in Policy 12-5). This

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
						would provide Horizons an opportunity to revisit N leaching requirements on consent expiry and in terms of any new plan framework required to give effect to the NPS-FM 2020.
Federated Farmers NZ	58.8 58.15 58.17	In the event that there is scope to amend the provisions relating to new intensive farming land, amend paragraph (e) to achieve the same or similar outcome as FFNZ's proposal for existing intensive farming activities. Amend Rule 14-2A so that it applies to new as well as existing IFLU activities.	Horticulture NZ (FS4.58.15, FS4.58.17)	Forest & Bird (FS1.58.8, FS1.58.15, FS1.58.17) EDS (FS5.58.8) Horowhenua DC (FS24.58.8, FS24.58.15, FS24.58.17)	Reject	I do not consider there is scope for the relief requested.
Federated Farmers NZ	58.11	Amend Table 14.1 as proposed in the Attachment to S58 (by inserting dates by which applications for IFLU activities must be lodged).	Horticulture NZ (S4.58.11)	Forest & Bird (FS1.58.11) Director General of Conservation (FS3.58.11) Horowhenua DC (FS24.58.11)	Accept in part	I agree that there should be a time limit for lodgement of applications by the outstanding unconsented IFLU activities. But I recommend that be placed in the rules, so that it is clear what default rule applies if there is non-compliance. S58.11 proposes a range of time frames (depending on WMSZ). I have proposed a two-year limit. As agreed with the RMA Planners (Question 16 20.08.20 JWS).

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
Federated Farmers NZ	58.16	Retain rule guide as drafted		Forest & Bird (FS1.58.16) Horowhenua DC (FS24.58.16)	Accept	No change is made to the rule guide.
Ngā Waihua o Paerangi Trust	63.23	Rule 14-1: retain matter of control (b) from the operative One Plan. Insert a new matter of control to address additional good management practices as set out in PC2.	Forest & Bird FS1.63.23	Federated Farmers NZ FS11.63.23	Accept in part	The wording of (b) would be superseded by other amendments I propose to Rule 14-1 to address issues raised in S54 and other submissions. This includes the insertion of a reference to GMP and additional measures.
	63.24	Rule 14-1: oppose matter of control (i) (to the extent that the content of Policies 14-5 and 14-6 are not supported).	Forest & Bird FS1.63.24		Accept in part	I propose amendments to Policies 14- and 14-6 that address the concerns of this submitter (and others).
	63.25 63.26	Retain Rule 14-2 as proposed, including the conditions, standards and terms.	Forest & Bird FS1.63.25, FS1.63.26		Reject	The wording of Rule 14-2 needs to be amended, in my view, to address the issues raised in other submissions.
	63.27 63.28	Rule 14-2: delete matter of discretion (b) and re-number (c) as (b) and retain the	Forest & Bird FS1.63.27, FS1.63.28		Reject	The wording of Rule 14-2 needs to be amended, in my view, to address the issues raised in other submissions. Matter of discretion (b) is the only discretionary matter

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
		wording in the operative One Plan.				allowing the decision maker to impose a limit on N leaching, and is in my opinion, appropriate.
	63.29	Rule 14-2: insert into discretionary matter (l) reference to Policy 14-6 to the extent that Policy 14-6 remains as in the operative One Plan or includes changes sought by S63.	Forest & Bird FS1.63.29		Accept	I agree that it would provide explicit guidance to future decision-making if reference to Policy 14-5 and 14-6 were added to (l) (now (m)).
	63.30	Rule 14-2A: amend from discretionary activity to non-complying activity; or from discretionary to prohibited activity.	Forest & Bird FS1.63.30	Federated Farmers NZ FS11.63.30	Reject	For the reasons explained in Chapter 7, I do not support non-complying activity or prohibited activity status. The One Plan anticipates the ability to apply for consent and for applications to be considered on their merits regardless of whether they comply with Table 14.2. It does not make existing IFLU activities prohibited activities and I do not consider that should be changed under PC2.
Ngāti Turanga, Te Roopū Taiao o Ngāti Whakatere Trust, Te Rūnanga o Raukawa	67.10 68.10 70.10	Rule 14-1: Reinstate the original wording: "compliance with the cumulative nitrogen leaching maximum * specified in Table 14.2 matter of control(b). It is recommended that the new proposed wording be introduced as a new matter, either noted as (ba) or (j) "good	Forest & Bird FS1.67.10, FS1.68.10, FS1.70.10 Water Protection Society FS2.67.10, FS2.68.10, FS2.70.10	Federated Farmers NZ FS11.67.10, FS11.68.10, FS.11.70.10	Accept in part	I propose a suite of amendments to address the concerns of S67, S68 and S70 and in particular the suggestion that the policy and rule framework of PC2 is not sufficiently robust. While I do not support reinstatement of the reference to the CNLM, I recommend inclusion of wording referencing GMPs and

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
		<i>management practices* to avoid, remedy or mitigate nutrient leaching and run-off, faecal contamination and sediment losses for the land^</i> . In proposed Rule 14-1, the reference to Policy 14-6 is unnecessary and should be removed.				additional measures (including BMPs where necessary to achieve N leaching reductions). It is my opinion that the reference to Policy 14-6 is appropriate. Policy 14-6 applies to decision-making on all IFLU applications, including controlled activities under Rule 14-1.
	67.11 68.11 70.11	Rule 14-2: Amend to read <i>"Existing intensive farming land use activities not complying with any of the conditions, standards, terms (a), (b) and (d) – (i) of Rule 14-1"</i> and that the new Conditions/Standards/Terms of Rule 14-2 be retained; delete matter of discretion (b) of Rule 14-2; Delete matter of discretion (b) (it is accepted as an exceedance of the CNLM cannot occur under proposed Rule 14-2).	Forest & Bird FS1.67.11, FS1.68.11, FS1.70.11 Water Protection Society FS2.67.11, FS2.68.11, FS2.70.11	Federated Farmers NZ FS11.67.11, FS11.68.11, FS.11.70.11	Accept	The submission points make a valid point about the references in the rule title. I recommend in the updated provision to include the suggested amendment (noting that there are actually (d) to (j) conditions).
	67.12 68.12 70.12	Amend Rule 14-2A to capture non-compliance with conditions, standards and terms as a non-complying activity.	Forest & Bird FS1.67.12, FS1.68.12, FS1.70.12	Manawātū DC FS7.67.12, FS7.68.12, FS7.70.12	Reject	For the reasons explained in Chapter 7, I do not support non-complying activity status for IFLU activities that do not comply with the conditions/standards/terms of the rules.

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
			Water Protection Society FS2.67.12, FS2.68.12, FS2.70.12	Federated Farmers NZ FS11.67.12, FS11.68.12, FS.11.70.12		
Ballance Agri-Nutrients	72.7	Rule 14-1: As consequence of the changes sought to Rule 14-2 amend 14-1 condition (a) as follows: <u>"(a) A nutrient management plan* must be prepared for the land[^] every three years, or following any significant farm system change, and provided annually to the Regional Council. NMP's must be reviewed annually to confirm ongoing appropriateness and where changes to the NMP are implemented, the Regional Council must be notified."</u>	Federated Farmers NZ FS11.72.7	Forest & Bird FS1.72.7 Potatoes NZ FS12.72.7	Accept in part	My view is that the frequency and purpose of reviews of the NMP should be specified in conditions and I recommend an amendment to 14-1 condition (a) to that effect.
	72.8	Rule 14-2: Amend condition (a) as follows: <u>"(a) A nutrient management plan* must be prepared for the land[^] every three years, or following any significant farm</u>		Forest & Bird FS1.72.8	Accept in part	My view is that the frequency and purpose of reviews of the NMP should be specified in conditions and I recommend an amendment to 14-2 condition (a) to that effect.

Submitter	Sub No.	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
		<u>system change, and provided annually to the Regional Council. NMP's must be reviewed annually to confirm ongoing appropriateness and where changes to the NMP are implemented, the Regional Council must be notified."</u>				
	72.9	Retain Rule 14-2A as notified.	Federated Farmers NZ FS11.72.9	Forest & Bird FS1.72.9 Water Protection Society FS2.72.9	Reject	Some amendment of Rule 14-2A is necessary to address the matters raised in submissions, including in S40 (by Dairy NZ).

21.7 Recommendations

7. For the reasons explained in paragraphs 1 to 5 and in the 'Reasons' column of the above table, I recommend that:

- (a) the wording of PC2 be amended as detailed in **Attachment N**; and
- (b) the submission points of Federated Farmers NZ (S58.18), Ngā Waihua o Paerangi Trust (S63.29), Ngāti Turanga (S67.11), Te Roopū Taiao o Ngāti Whakatere Trust (S68.11) and Te Rūnanga o Raukawa (S70.11) be **accepted**; and
 - i. the further submission points in support of the submission points listed in (b) above be **accepted**; and
 - ii. the further submission points of Federated Farmers NZ (FS11.67.11, FS11.68.11, FS11.70.11) that oppose the submission points listed in (b) above be **rejected**; and
- (c) the submission points of Lisa & Paul Charmley (S3.9), Kahungunu ki Tāmaki nui-a-Rua Trust (S4.8), Dairy NZ (S40), Ravensdown (S45.10, S45.11, S45.12), Ian Grant & Shirley Cumming (S47.9), Sarah von Dadelszen (S48.9), Russell & Karen Phillips (S52.9), EDS (S54.6), Fish and Game (S55.7, S55.8), Federated Farmers NZ (S58 generally and S58.11, S58.13, S58.14, S58.16 specifically), Ngā Waihua o Paerangi Trust (S63.23, S63.24, Ngāti Turanga (S67.10), Te Roopū Taiao o Ngāti Whakatere Trust (S68.10), Te Rūnanga o Raukawa (S70.10), Ballance Agri-Nutrients (S72.7 and S72.8) be **accepted in part** to the extent that the rules are amended; and
 - i. the further submission points in support of the submission points listed in (c) above be **accepted in part**; and
 - ii. the further submission points that oppose the submission points listed in (c) above be **accepted in part**; and

- (d) the submission points of EDS (S54.5 and S54.7), Fish and Game (S55.6), Ngā Waihua o Paerangi Trust (S63.25, S63.26, S63.27, S63.28, S63.30), Ngāti Turanga (S67.12), Te Roopū Taiao o Ngāti Whakatere Trust (S68.12), Te Rūnanga o Raukawa (S70.12), Ballance Agri-Nutrients (S72.9) be **rejected** to the extent that the rules are amended; and
 - i. the further submission points in support of the submission points identified in (d) above be **rejected**; and
 - ii. the further submission points that oppose the submission points identified in (d) above be **accepted**; and
- (e) The submission points of Federated Farmers NZ (FS58.8, S58.15) be **rejected** and:
 - i. the further submissions in support of the submission points listed in (e) above be **rejected**; and
 - ii. the further submission points opposed to the submissions listed in (e) above be **accepted**.

21.8 Definitions

- 8. I have addressed submission points requesting amendments to current One Plan definitions, or insertion of new definitions, in earlier chapters of this Section 42A report, specifically:
 - (a) The proposed PC2 definition of ‘good management practices’ - in Chapter 11;
 - (b) The One Plan definition of ‘biosolids’ – in Chapter 13 in relation to the municipal wastewater issue (submission point S83.8);
 - (c) The One Plan definition of ‘fertiliser’ – in Chapter 13 in relation to the municipal wastewater issue (submission point S83.9);

- (d) The One Plan definition of 'intensive sheep and beef farming' – in Chapter 13, in relation to the issues raised by the Joint Councils about land irrigation of treated municipal wastewater (submission point S83.10);
- (e) A requested new definition of 'irrigation' – in Chapter 13 in relation to the municipal wastewater issue (submission point S87.1);
- (f) The proposed amendments of PC2 to the definition of 'nutrient management plan' – in Chapter 17 (submission points S40.12, S45.14, S54.1, S55.2, S58.20, S61.17, S63.32, S65.39, S72.11, S75.12).

9. In this chapter, I address the submission points that raise issues with, or request new, definitions of:

- (a) 'Nitrogen baseline'
- (b) '75th percentile nitrogen leaching loss'
- (c) 'Existing intensive farming land uses'
- (d) 'New intensive farming land uses'
- (e) 'Enterprise'
- (f) 'Farm'
- (g) 'Horticultural farming'
- (h) 'Baseline Commercial Growing Area'
- (i) 'Crop Rotation'
- (j) 'Commercial vegetable growing'

10. I set out in the table below the requested relief and my analysis and recommendations in respect of that relief:

Requested by Submitter:	Sub No.	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
Requested New Definitions					
Insert new definition 'nitrogen baseline' <i>'means the discharge of nitrogen below the root zone, as modelled with Overseer, or equivalent model approved by the Chief Executive of Horizons Regional Council, for the period 1 July 2012 to 30 June 2013. If an updated version of Overseer is issued, the most recent version is to be used to recalculate the nitrogen baseline* using the same nitrogen related farm input data as used for the 1 July 2012 to 30 June 2013 period.'</i>					
DairyNZ	40.13		Forest & Bird FS1.40.13, FS1.58.21	Accept in part	I have recommended, in Chapter 11 of the Section 42A Report an alternative controlled activity pathway which adapts the suggestion of S40 and S58. The definition of 'nitrogen baseline' is central to that. However, I recommend amending the definition to reflect the other amendments I propose to the definition of 'nutrient management plan'. The changes I propose in Chapter 15, to address Overseer updates, should eliminate the need to refer to that issue in this definition. I recommend the following amendments: <i>'means the discharge of nitrogen below the root zone, as modelled using a recognised nutrient management model with Overseer, or equivalent model approved by the Chief Executive of Horizons Regional Council, for the period 1 July 2012 to 30 June 2013. If an updated version of Overseer is issued, the most recent version is to be used to recalculate the nitrogen baseline* using the same nitrogen related farm input data as used for the 1 July 2012 to 30 June 2013 period.'</i>
Federated Farmers NZ	58.21		Horticulture NZ FS4.40.13, FS4.58.21		
Lisa & Paul Charmley	3.10		EDS FS5.40.13, FS5.58.21		
Ian & Anne Cumming	47.10		Horowhenua DC FS29.40.13, FS24.58.21		
Russell & Karen Phillips	52.10				

Requested by Submitter:	Sub No.	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
Insert new definition '75th percentile nitrogen leaching loss' <i>'means the 75th percentile value (units of kg N/ha/year) of all of the nitrogen baseline* values for dairy farming activities in the Surface Water Management Zone* as determined for each Surface Water Management Zone*. The 75th percentile nitrogen leaching loss* is recalculated each time the nitrogen baseline is updated following release of a new version of Overseer.</i>					
DairyNZ	40.14	Potatoes NZ FS12.40.14	Forest & Bird FS1.40.14,, FS1.58.22	Accept in part	I have recommended, in Chapter 11 of the Section 42A Report an alternative controlled activity pathway which adapts the suggestion of S40 and S58. The definition of '75th percentile nitrogen leaching loss' is central to that. Although the definition was put forward by Dairy NZ, the rule I have proposed would be open to any IFLU activity. Therefore I have changed the reference to 'dairy farming' in the definition to IFLU activities. As above, if my other recommendations about inclusion of a methodology for updating Overseer are accepted, there should be no need to include reference to that issue in this definition: <i>'means the 75th percentile value (units of kg N/ha/year) of all of the nitrogen baseline* values for dairy farming intensive farming land^ use activities in the Surface Water Management Zone* as determined for each Surface Water Management Zone*. The 75th percentile nitrogen leaching loss* is recalculated each time the nitrogen baseline is updated following release of a new version of Overseer.</i>
Federated Farmers NZ	58.22		DOC FS3.58.22		
Lisa & Paul Charmley	3.10		Horticulture NZ FS4.40.14, FS4.58.22		
Ian & Anne Cumming	47.10		EDS FS5.40.14, FS5.58.22		
Russell & Karen Phillips	52.10		Potatoes NZ FS12.58.22		
			Beef & Lamb NZ FS14.40.14		
			Horowhenua DC FS29.40.14, FS24.58.22		
Insert new definitions: <i>'Existing intensive farming land uses, in the targeted Water Management Sub-Zones* identified in Table 14.1, are those intensive farming land uses which were being conducted prior to the dates listed in Table 14.1 for the Water Management Sub-Zones* in which the land is located'; and</i>					

Requested by Submitter:	Sub No.	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
<i>'New intensive farming land uses, in all Water Management Sub-Zones are those which have been carried out only since August 2010 in the case of dairy farming and only since 9 May 2013 in the case of commercial vegetable growing*, cropping* and intensive sheep and beef*.'</i>					
Water Protection Society	65.40	Forest & Bird FS1.65.40	Federated Farmers NZ FS11.65.40	Accept in part	I have recommended amendments to Policy 14-5 and the footnotes to Policy 14-5 that have similar effect. Importantly, the amendments I propose adopt the language used in Policy 14-5 and Table 14.1.
Insert new definition: <i>'Enterprise means one or more parcels of land held in single or multiple ownership to support the principle land use, or land on which the land use is reliant, which constitutes a single operating unit for the purposes of management.'</i>					
Horticulture NZ	66.17	Chris Pescini FS6.66.17 Woodhaven Gardens FS8.66.17 Horowhenua DC FS26.66.17	Forest & Bird FS1.66.17 DairyNZ FS9.66.17 Federated Farmers FS11.66.17	Accept	I recommend amendments to the IFLU rules that include reference to 'enterprise' (discussed below) and I therefore agree that this definition is necessary.
Insert new definition: <i>'Farm means a property, area of land, or enterprise used for pastoral farming, horticultural farming, arable farming, other than a farm engaged in intensive indoor primary production.'</i>					
Horticulture NZ	66.18	Chris Pescini FS6.66.18	Forest & Bird FS1.66.18	Reject	This proposed definition is associated with Horticulture NZ's requested alternative provision for existing and new CVG. I have

Requested by Submitter:	Sub No.	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
		Woodhaven Gardens FS8.66.18 Horowhenua DC FS26.66.18	DairyNZ FS9.66.18 Federated Farmers FS11.66.18		not recommended those requested changes. In my opinion, the issues raised by the submission (for existing IFLU activities) can be addressed within the framework of PC2 and Chapter 14. On that basis, this definition is not required.
Insert new definition: <i>'Horticultural farming means where the predominant activity is growing food or beverage crops for human consumption (other than arable crops), or flowers for commercial supply.'</i>					
Horticulture NZ	66.19	Chris Pescini FS6.66.19 Woodhaven Gardens FS8.66.19 Horowhenua DC FS26.66.19	Forest & Bird FS1.66.19 DairyNZ FS9.66.19 Federated Farmers FS11.66.19	Reject	This proposed definition is associated with Horticulture NZ's requested alternative provision for existing and new CVG. I have not recommended those requested changes. In my opinion, the issues raised by the submission (for existing IFLU activities) can be addressed within the framework of PC2 and Chapter 14. On that basis, this definition is not required.
Insert new definitions: <i>"Baseline Commercial Growing Area means the aggregated area of land utilised for commercial vegetable production at the dates in Table 14.1 and the land is under the control (owned or leased) of a single grower or enterprise; and the area of land which is categorised as LUC Class I and/or Class II in each water management sub-zone. Crop rotation is the systematic planting of different crops in a particular order over several years in the same growing space. This process helps maintain nutrients in the soil, reduce soil erosion, and prevents plant diseases and pests."</i>					
Potatoes NZ	75.13	Horticulture NZ FS4.75.13	Forest & Bird FS1.75.13	Accept in part	I have recommended, in Chapter 12 of this Section 42A report, amendments to the rules to provide an alternative controlled activity pathway for CVG which limits existing CVG to the

Requested by Submitter:	Sub No.	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
		Chris Pescini FS6.75.13 Woodhaven Gardens FS8.75.13 Horowhenua DC FS27.75.13	Federated Farmers FS11.75.13		'growing area' of commercial vegetable growing in the 'baseline growing period'. I agree with the submitter that specification of a baseline year is important (for the reasons explained in Dr Jolly's section 42A technical report). Dr Jolly recommends a 2013/2014 baseline year (or 2012/2013 to align with the proposal by Dairy NZ and Federated Farmers NZ). I recommend the following amendments to the suggested definition: <u>Baseline Commercial Growing Area means the aggregated area of land utilised for commercial vegetable production in the 2012/2013 growing season at the dates in Table 14.1 and includes all the land is under the control (owned or leased) of a single grower or enterprise. ; and the area of land which is categorised as LUC Class I and/or Class II in each water management sub-zone.</u> I agree the proposed definition of 'crop rotation' may be helpful.
Operative One Plan Definition of 'Commercial Vegetable Growing'					
Amend to read: 'Commercial vegetable growing means using an area of land greater than 4 ha for producing commercial production of vegetable crops for human consumption, <u>on a horticultural farm</u>. It includes the whole rotational cycle, being the period of time that is required for the full sequence of crops, including any pasture phase in the rotation. Fruit crops, egetables that are perennial, dry field peas or beans <u>and other low intensity horticultural crops</u> are not included.					
Horticulture NZ	66.16	Chris Pescini FS6.66.16 Woodhaven Gardens FS8.66.16	Forest & Bird FS1.66.16 DairyNZ FS9.66.16 Federated Farmers NZ FS11.66.16	Reject	My opinion is that the definition in the One Plan is fit for purpose: Commercial vegetable growing means using an area of land greater than 4 ha for producing vegetable crops for human consumption. It includes the whole rotational

Requested by Submitter:	Sub No.	Supported (in part or entirely) by:	Opposed (in part or entirely) by:	Recommendation	Reasons
		Horowhenua DC FS26.66.16			<i>cycle, being the period of time that is required for the full sequence of crops, including any pasture phase in the rotation. Fruit crops, vegetables that are perennial, dry field peas or beans are not included.</i> What I have done recommended additional consideration in Policy 14-6 of the crop rotation requirements of CVG and of the value of food security.

11. For the reasons explained in the above table, I recommend that:

(a) Submission point S66.17 (Horticulture NZ) be **accepted**; and

- i. The further submission points that support submission point S66.17 be **accepted**; and
- ii. The further submission points that oppose submission point S66.17 be **rejected**; and

(b) The submission points of Dairy NZ (S40.13, S40.14), Federated Farmers NZ (S58.21, S58.22), Lisa & Paul Charmley (S3.10), Ian Grant & Shirley Cumming (S47.10), Russell & Karen Phillips (S52.10), the Water Protection Society (S65.40) and Potatoes NZ (S75.13) be **accepted in part**; and

- i. The further submission points that support or oppose the submission points listed in (b) above be **accepted in part**; and

(c) Submission points S66.16, S66.18 and S66.19 by Horticulture NZ be **rejected**; and

- i. The further submission points that support submission points S66.16, S66.18 and S66.19 be **rejected**; and
- ii. The further submission points that oppose submission points S66.16, S66.18 and S66.19 be **accepted**.

22 Requested Changes to PC2 Table 14.2

- The following table summarises the issues raised and relief requested by submissions in relation to Table 14.2:

Submitter	Sub No.	S/O	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
Ruapehu District Council	2.5		Delete Table 14.2.	Horowhenua DC FS19.2.5	Forest & Bird FS1.2.5 Water Protection Society FS2.2.5 Potatoes NZ FS12.2.5
Lisa and Paul Charmley	3.5	OI P	Greater certainty is required for farmers as to when rules apply from, what is treated as 'existing' farmer, and what year we are at in terms of Table 14.2.		
BakerAg NZ Limited	5.2		No decision requested. Submitter seeks clarification about whether holders of existing IFLU consents, at rates less than the Table 14.2 CNLMs, will be able to apply to increase N leaching to the Table 14.2 values.		
BakerAg NZ Limited	5.3		No decision requested. PC2 will allow land use change to increase N leaching to the PC2 limits."		
BakerAg NZ Limited	5.4		No decision requested. Submitter poses questions about recalibrated Table 14.2 and relationship with the recent Central Government proposals (will the proposed changes to Table 14.2 be contrary to the 5-year moratorium on any increase in contaminant load mooted by the draft NES-FM?).		
DairyNZ Limited	40.7	SI P	Retain the updated Table 14.2 subject to:	Water Protection Society FS2.40.7	Forest & Bird FS1.40.7

Submitter	Sub No.	S/O	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
			1. Including a footnote indicating the version of Overseer used to derive the numbers. 2. Including the methodology used to calculate the numbers in One Plan Table 14.2 as an Appendix. 3. Including provision in One Plan to update Table 14.2 numbers in accordance with the methodology described in 3 above, when a new version of Overseer is issued. 4. Include reference to the fact that the updating described in 4 above will be done without using a Schedule 1 process.		Horowhenua DC FS29.40.7
Ravensdown Limited	45.9	O	While there will continue to be ongoing issues associated with the use of 'cumulative nitrogen leaching maximum', as contained in Table 14.2, retain the table as amended by PPC2 given its use as a resource management tool throughout the One Plan; and Amend Table 14.2 by identifying the version of Overseer (version 6.3.1) that was used to calculate the leaching values contained in this table.	Water Protection Society FS2.45.9	Forest & Bird FS1.45.9
Ian & Shirley Cumming Russell and Karen Phillips, Waka Dairies Ltd	47.3 52.3	O	Concerned that Council's proposal to retain the LUC approach through Table 14.2 will result in future plan changes. That continues the uncertainty we currently face and is unacceptable to farmers. It is unknown how future version changes to		

Submitter	Sub No.	S/O	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
			Overseer would impact the submitters.		
Ian & Shirley Cumming Russell and Karen Phillips, Waka Dairies Ltd	47.5 52.5	O P	Greater certainty is required for farmers as to when rules apply from, what is treated as 'existing' farmer, and what year we are at in terms of Table 14.2.		
Sarah von Dadelszen	48.3		Submitter is very concerned about the continued reliance on Overseer and retaining the LUC approach through Table 14.2. Overseer was not developed for this and the science is not good enough for us as farmers to need to rely on it for compliance. Submitter does not therefore know how future version changes to Overseer will impact on them, or our ability to meet the LUC numbers.		
Mark Thomas Woodruffe	51.1	S	Go ahead with the proposed plan change 2.	Water Protection Society (allow the proposed revision of CNLM in Table 14.2) FS2.51.1	
Russell and Karen Phillips, Waka Dairies Ltd	52.6	O	Table 14.2 numbers also do not change, despite Overseer version updates that model new numbers on farm. This is very frustrating and upsetting as these numbers change despite no variations to our farm system, and also with no consequential updates to Table 14.2 to reflect the new outputs as a result of the Overseer version change.		
Andrew Day	53.1		Supports the framework of Table 14.2 and the inherent transparent	Water Protection Society FS2.53.1	

Submitter	Sub No.	S/O	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
			allocation of scarce resource across entire catchments. Submitter supports the need to include updates of Overseer to accurately assess compliance with Table 14.2, but does not support these particular updated values in Table 14.2 and particularly not as a region wide threshold value.		
Environmental Defence Society Incorporated	54.8	S	EDS supports the changes to the LUC leaching limits in Table 14.2	Forest & Bird FS1.54.8 Water Protection Society FS2.54.8	Potatoes NZ FS12.54.8 (prefers PNZ approach for CVG)
Wellington Fish & Game Council	55.1		Wellington Fish and Game Council supports the changes to the LUC leaching limits in Table 14.2.	Forest & Bird FS1.55.1 Water Protection Society FS2.55.1	
BEL Group	56.1	S	Support the updated Table 14.2.	Water Protection Society FS2.56.1	
Woodhaven Gardens Ltd	57.5		Proposes an alternative set of limits for Land Users, below the values in Table 14.2 to ensure N loss cannot increase eroding the value of cuts made by user exceeding Table 14.2.	Horticulture NZ FS4.57.5	Forest & Bird FS1.57.5
Federated Farmers of New Zealand Inc.	58.12	OI P	Amend Table 14.2 as proposed in the 'Attachment 1' of Federated Farmers submission (by inserting into heading: 'Table 14.2 Cumulative nitrogen leaching maximum* by Land Use Capability Class* <u>that apply to consent applications until 30 June 2023 and numbers below calculated in Overseer 6.3.??</u> '.	Water Protection Society FS2.58.12 Horticulture NZ (supports changes which will add clarity to the applicability of Table 14.2) FS4.58.12	Forest & Bird FS1.58.12 EDS FS5.58.12 Beef & Lamb NZ FS14.58.12 Horowhenua DC FS24.58.12

Submitter	Sub No.	S/O	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
Ngā Waihua o Paerangi Trust	63.21	S	Retain the original numbers in Table 14.2 and apply it to the catchments not in the Tararua District (i.e. those catchments on the western side of the Ruahine and Tararua Ranges). The only testing has been in Tararua District – can't be translated elsewhere in the region.	Forest & Bird FS1.63.21 (to the extent not in conflict with S59) EDS FS5.63.21	Federated Farmers NZ FS11.63.21
Ngā Waihua o Paerangi Trust	63.22	O	Provide for the amended numbers in Table 14.2 in a new Table 14.2A to apply to those catchments in the Tararua District only. And requests a new table to apply to other water management sub-zones	Forest & Bird (to the extent not in conflict with S59) FS1.63.22 EDS FS5.63.22	
Ngāti Turanga, Te Roopū Taiao o Ngāti Whakatere Trust, Te Rūnanga o Raukawa	67.9, 68.9, 70.9	OI P	Table 14.2: amend Policy 14-5 to include a clause specifying the timing, trigger and method for review of Table 14.2.	Forest & Bird FS1.67.9, FS1.68.9, FS1.70.9 Water Protection Society FS2.67.9, FS2.68.9, FS2.70.9	Federated Farmers NZ FS11.67.9, FS11.68.9, FS11.70.9
Ballance Agri-Nutrients Limited	72.6	SI P	Amend Table 14.2 as follows: <u>"Table 14.2 Cumulative nitrogen leaching maximum by land use capability class, as calculated by Overseer version 6.3.1."</u>	Water Protection Society FS2.72.6 Federated Farmers NZ FS11.72.6	Forest & Bird FS1.72.6
Beef + Lamb New Zealand	74.14	S	Ensure that the maximum nitrogen leaching numbers in Table 14.2: - are based on LUC - relate to the natural capital of soils	Water Protection Society FS2.74.14	Forest & Bird FS1.74.14 Horowhenua DC FS33.74.14

Submitter	Sub No.	S/O	Summary of Requested Relief	Supported (in part or entirely) by:	Opposed (in part or entirely) by:
			- apply to intensive systems as defined by the One Plan - set a trajectory of improvement towards the water quality outcomes as set out in Schedule E.		
Carla Marsden	80.1	S	Submitter supports the Proposed Plan Change 2 and Table 14.2.	Water Protection Society FS2.80.1.1	Water Protection Society FS2.80.1.2

22.1 Relief Requested

- One submitter (Ruapehu DC S2.5) requests the deletion of Table 14.2. Ngā Waihua o Paerangi Trust (S63.21 and S63.22) requests that the Table 14.2 values (limits) only apply to water management sub-zones in the Tararua District and that a separate table be inserted with values tailored for other water management sub-zones (including some not currently listed in Table 14.1). Andrew Day (S53.1) supports the framework of Table 14.2 but not the specific recalibrated limits proposed by PC2. Federated Farmers NZ supports the recalibration of Table 14.2 limits but requests that these cease to be applicable after 30 June 2023. Woodhaven Gardens Ltd (S57.5) has proposed a separate set of CVG-specific N leaching limits.
- All other submitters support the recalibration of Table 14.2 values but, either, raise concerns about how future Overseer version upgrades will be accommodated by Table 14.2 or seek greater clarity about what is 'new' and what is 'existing' for the purposes of Table 14.2. Baker Ag (S5.2 and S5.4) asks whether consented IFLU activities will be able to apply to leach 'up to' the recalibrated Table 14.2 values.
- In addition, Potatoes NZ (S75) requests insertion of an alternative Table 14.2A which focuses only on LUC classes I, II and III and caps the cumulative nitrogen leaching maximum (CNLM) at the Year 5 rate included in the recalibrated PC2 Table 14.2.⁸⁰ I have not recommended insertion of the additional table. I have, instead proposed an alternative controlled activity consent pathway, to sit alongside the pathway necessitating compliance with the CNLM in Table 14.2. On that basis, I do not consider that the proposed Table 14.2 is necessary.

22.2 Discussion: Matters Already Addressed in Earlier Chapters

- I addressed in Chapter 9 of this report, the requests of Ngā Waihua o Paerangi Trust to limit Table 14.2 to the Tararua District and to insert new values for other water management sub-zones. I am satisfied, based on the technical reports of Dr James Hanly and Associate Professor Horne, that the Table 14.2 values for the listed LUC classes have been appropriately calculated.

⁸⁰ In the attachment to submission S75.

Because they have been calculated by LUC class, I am satisfied that the CNLM are applicable to the same LUC classes in water management sub-zones throughout the region. For the reasons explained in Chapter 9 of this report, I do not support excluding from or adding water management sub-zones to Table 14.1 (thereby being subject to Table 14.2).

6. Mr Day's submission did not propose alternative CNLM values. I, and Horizons' other witnesses, therefore, have no basis for altering the values proposed by PC2. Hopefully, Mr Day will address his reasons for disagreeing with the recalibrated Table 14.2 values (and his suggested alternative values) in his evidence at the hearing.
7. For the reasons explained in Chapter 11 of this report, I do not consider it is necessary to limit the applicability of Table 14.2 to 30 June 2023, as requested by Federated Farmers NZ.
8. I address the alternative N leaching limits and alternative consent pathways proposed by Woodhaven Gardens Ltd (S57) and other CVG interests in Chapter 12 of this report. In principle, I agree with S57 that there is benefit at this time in a consent pathway which is tailored for CVG. In Chapters 12, 20 and 21 of this report I propose an alternative consent pathway for CVG that includes a differently-worded N leaching limit for CVG (although not identical to that proposed by S57).

22.3 Discussion: Overseer Version Changes

9. Associate Professor Horne addresses in his section 42A technical report the concerns of submitters about whether and how future Overseer version changes should be accommodated into the One Plan framework. I recommend in Chapter 15 of the Section 42A Report the insertion of explanatory text into the preamble to Table 14.2, to clarify which version of Overseer (6.2.3) was used to derive the recalibrated Table 14.2 CNLMs. In addition, in Chapter 15, I also recommend inclusion of a 'reference file' methodology for accommodating future Overseer version changes.

22.4 Discussion: The Meaning of 'New' and 'Existing' IFLU Activities

10. The meaning of 'new' and 'existing' IFLU activities is set out in Policy 14-5. However, the task of determining whether an IFLU activity is 'new' or 'existing' requires reference to footnotes which are confusing. In response to other submission points, I have recommended, in Chapter 20 of this report, some amendments to make that meaning clearer. The footnotes to Policy 14-5 explain that an IFLU activity is 'new' or 'existing' depending on when it was lawfully established by reference to the date of legal effect for that IFLU activity. For 'existing' IFLU activities, these dates vary by water management sub-zone (as detailed in Table 14.1). For 'new' IFLU activities, the dates vary by type of IFLU. This comes about as a result of the One Plan appeals process. The date of legal effect for new IFLU activities was settled earlier than for existing IFLU activities.

11. Care has to be taken, in reading Policy 14-5, because 'new' IFLU activities are not simply the 'left-over' IFLU activities that are not 'existing' ones. The rules for 'new' IFLU activities have an earlier date of legal effect than those for 'existing' ones. The two dates of legal effect for 'new' IFLUs (24 August 2010 and 9 May 2013) are explained in footnotes 2 to Policy 14-5 and in footnotes 3 (to Table 14-1) and 4 (in Table 14.2).
12. Although the dates of legal effect have passed, they remain relevant in terms of clarifying whether activities that have established since those dates are lawfully established as 'new' and, therefore, which rules apply to those. Intensification of consented IFLU activities is considered to be 'new' for the purposes of the rules, where that intensification has occurred since 2010 (for dairy) or 2013 (for other IFLU).
13. I summarise in Table 22.1 below, the dates on which Rule 14-1 had legal effect for the purpose of requiring consent for existing IFLU activities in the targeted water management sub-zones and new IFLU activities in all other water management sub-zones.

Table 22.1 Dates of Legal Effect (Being the Threshold Dates for 'Existing' and 'New' IFLU Activities)

		Existing IFLU Activities (all types, in targeted WMSZs only)	New IFLU Activities (in targeted and all other WMSZs)	
Catchments	Targeted Water Management Sub-Zones	Date of Legal Effect: <u>Existing</u> IFLU	Date of Legal Effect Defining 'New' Dairy	Date of Legal Effect Defining 'New' CVG, Cropping & Sheep/Beef
Mangapapa	Mana_9b	July 2014	Aug. 2010	May 2013
Waikawa	West_9a, 9b	July 2014	Aug. 2010	May 2013
Papaitonga	West_8	July 2014	Aug. 2010	May 2013
Mangatainoka	Mana_8a, 8b, 8c, 8d	July 2015	Aug. 2010	May 2013
Coastal Lakes	West_4, 5, 6	July 2015	Aug. 2010	May 2013
Coastal Rangitikei	Rang_4	July 2015	Aug. 2010	May 2013
Lake Horowhenua	Hoki_1a, 1b	July 2015	Aug. 2010	May 2013
Upper Manawatū above Hopelands	Mana_1a, 1b, 1c Mana_2a, 2b Mana_3, 4 Mana_5a to 5e	July 2016	Aug. 2010	May 2013
Manawatū above Gorge	Mana_6, Mana_9a, 9c	July 2016	Aug. 2010	May 2013

14. I agree that working out the date by which an individual IFLU activity had to be established to be considered 'existing' takes some translation. I have proposed amendments in Chapter 20 to address that.

22.5 Discussion: Leaching 'Up To' Table 14.2

15. Controlled activity consents have been granted authorising N leaching rates less than Table 14.2. Under the operative Chapter 14 rules, it is possible for an existing (and new) IFLU which has a N leaching rate less than Table 14.2 to apply for consent up to the maximum specified in Table 14.2 (i.e. there is no grandfathering of N leaching as at a certain date). PC2 does not alter that proposition. However, as I discuss in Chapter 4, the NES-FM now imposes restrictions on additional dairy farm and dairy support area and on additional irrigated area. As earlier noted, RMA Sections 44A(3) to (44 (5) provide that a local authority must amend a rule in a plan that conflicts with a provision in a NES and must do so without using the RMA Schedule 1 process. Horizons is currently considering what changes are required to the One Plan to implement the NES-FM requirements. Those changes will be in addition to, and may override, the PC2 provisions but it is not necessary or appropriate to try to introduce those through PC2 (the RMA intends that these changes must be made separately from any Schedule 1 process). I anticipate being able to update the Panel separately on these matters.
16. Helpfully, the N load modelling considers a scenario 'proposed consented strict', under which all consented IFLU activities are held to their authorised N leaching limits, where these are less than the Table 14.2 limits. The modelling results, summarised in Table 3 of the Land, Water People report⁸¹ indicates that the mean relative difference (exceedance of Schedule E targets) would be less under the 'strict' scenario compared with all PC2 scenarios. The 'strict' scenario is conservative (caps all consented IFLU⁸² activities at their consented leaching rates) but provides an indication of the likely outcome of implementing the NES-FM.

22.6 Recommendations

17. For the reasons explained in the foregoing paragraphs, I recommend that:
 - (a) The preamble to Table 14.2 be amended by inserting explanatory text clarifying that the CNLM values were derived using Overseer 6.2.3 (as detailed in paragraph 14 (a) of Chapter 15 of this section 42A report:

Table 14.2 sets out the *cumulative nitrogen leaching maximum** for the *land^* used for intensive farming *land^* use activities within each specified *land use capability class**. The cumulative nitrogen leaching maximum* values in Table 14.2 were derived using Overseer 6.2.3; and

- (b) The submission points of Lisa and Paul Charmley (S3.5), Dairy NZ (S40.7), Ravensdown Limited (S45.9), Ian and Shirley Cumming (S47.3 and S47.5), Russell and Karen Phillips (S52.3, S52.5 and S52.6), Sarah von Dadelszen (S48.3), Mark Woodruffe (S51.1), Andrew Day (S53.1), EDS (S54.8), Fish and Game (S55.1), BEL Group (S56.1), Woodhaven Gardens

⁸¹ Scenario Modelling of Nitrogen Management in Manawātū-Whanganui Region (Land, Water People, August 2020).

⁸² Most consented IFLU activities are dairy IFLU (which is what the NES-FM further restricts).

Ltd (S57.5), Ngāti Turanga (S67.9), Te Roopū Taiao o Ngāti Whakatere (S68.9), Te Rūnanga o Raukawa (S70.9), Ballance Agri-Nutrients Ltd (S72.6), Beef and Lamb NZ (S74.14) and Carla Marsden (S80.1) be **accepted in part** to the extent that Table 14.2 is retained but amended as detailed in paragraph 18 above; and

- i. The further submission points in support of the submission points listed in (b) above be **accepted in part** to the extent that Table 14.2 is retained but amended; and
 - ii. The further submission points that oppose the submission points listed in (b) above be **rejected**; and
- (c) The submission points of Ruapehu District Council (S2.5) Ngā Waihua o Paerangi Trust (S63.21 and S63.22) and Federated Farmers NZ (S58.12) be **rejected**; and
- i. The further submission points in support of the submission points listed in (c) above be **rejected**; and
 - ii. The further submission points that oppose the submission points listed in (c) above be **accepted**; and
- (d) That the Panel note that no decision is required in respect of submission points S5.2, S5.3 and S5.4 (BakerAg).

23 Other Issues Raised in Submissions

23.1 Further Submission FS10 (Teresa M Schulz)

1. The further submission of Teresa Schulz did not support or oppose any first-round submission. The submitter expresses broad support for PC2 to the extent that the submission recognises the need to address nutrient management in the region and to update Table 14.2 to the latest version of OVERSEER. The submission also discusses a suggested alternative approach to nutrient management (pro-rata the rates of leaching limits). However, the further submission requests no specific relief.
2. No change is required to respond to FS10. At most, the further submission offers general support for PC2. There are some procedural issues. First, the further submission is arguably not 'on' PC2 because it is not specific to any first-round submission. Second, although the further submission does not explicitly request that its suggested alternative framework be adopted, it is not an alternative that lies between the operative One Plan and PC2. Also, coming via a further submission, it is not a proposal that any person interested in PC2 could reasonably have foreseen. In this respect, I do not consider the suggested alternative is 'on' PC2. The submitters' intention should be acknowledged but no further action is required.

23.2 Recommendation - FS10 (Teresa M Schulz)

3. For the reasons explained in the foregoing paragraphs, I recommend that the Panel note that no decision is required in respect of further submission points FS10.1 and FS10.2.

23.3 Discharge of Biosolids (Submission S85.1)

4. The submission by Te Mauri o Rangitāne o Manawatū and Tanenuiarangi Manawatū Incorporated (S85.1) raises concerns about the discharge of biosolids onto land containing wāhi tapu. The submission requests a setback for biosolids discharge relevant to the size, importance and definition of the wāhi tapu in question. The submission states that '*Rangitāne o Manawatū do not support the use of biosolids on land for agricultural purposes.*'
5. The discharge of 'grade Aa biosolids' is referenced in One Plan Rules 14-1 and 14-2 and in proposed PC2 Rule 14-2. The references are explained here:

Rule 14-1

Rule 14-1 is the controlled activity rule for existing IFLU activities. The rule provides for existing IFLU activities, as well as ancillary discharges associated with that activity, including (under the 'Activity' column in the rule table) '*(c) the discharge^ of grade Aa biosolids* or compost* onto or into production land**'. The conditions/standards/terms for Rule 14-1 specify in (h) that '*the discharge^ of grade Aa biosolids* onto or into production land^ and any ancillary discharge^ of contaminants into air must comply with the conditions^ of Rule 14-7.*' Rule 14-7 is the

permitted activity rule for the discharge of grade Aa biosolids in all situations (not just as part of an IFLU activity) and it applies region-wide (whereas Rule 14-1 only applies in the target catchments).

Rule 14-2

Rule 14-2 is the restricted discretionary activity for existing IFLU activities that fail to comply with any of the conditions prescribed in Rule 14-1 (except for conditions (a), (b) and (c) which prescribe N leaching requirements).⁸³ As with Rule 14-1, Rule 14-2 provides for the existing IFLU activity as well as any ancillary discharges associated with that IFLU activity (including '(c) *the discharge^ of grade Aa biosolids* or compost* onto or into production land**'). There are no conditions specified for the discharge of grade Aa biosolids. There is also no discretionary matter that explicitly mentions grade Aa biosolids.

Rule 14-2A

Rule 14-2A is the new discretionary activity for existing IFLU activities that fail to comply with the N leaching requirements set out in conditions (a), (b) and (c) of Rule 14-1. As with Rules 14-1 and 14-2, Rule 14-2A provides for the existing IFLU activity as well as any ancillary discharges associated with that IFLU activity (including '(c) *the discharge^ of grade Aa biosolids* or compost* onto or into production land**'). There are no conditions specified for the discharge of grade Aa biosolids.

6. Rule 14-7 includes a condition (d) that prescribes minimum separation distances from sensitive areas and habitats for the discharge of grade Aa biosolids. Clause (d) (iii) requires a 50m setback from any historic heritage identified in any district plan or regional plan. The One Plan Glossary defines 'wāhi tapu' in the following way:

Wāhi tapu means a site* sacred to Māori in the traditional, spiritual, religious, ritual, or mythological sense and includes rua kōiwi*.

7. The One Plan does not identify wāhi tapu in any schedule or on any map. It may be that some District Plans do identify wāhi tapu. It is also not clear whether the submission is referring to wāhi tapu that are identified and mapped, or to wāhi tapu more generally. It appears the submission point relates to the discharge of biosolids in all situations, and not only as part of an IFLU activity.
8. For the reasons explained in Chapter 13 of this Section 42A report, my expectation is that the irrigation of an IFLU activity by treated wastewater from a municipal wastewater treatment plant would likely trigger an IFLU activity to become a *new* IFLU (where the farm is not previously irrigated). However, that is not the only circumstance in which wastewater

⁸³ Note that PC2 proposes that non-compliance with the leaching requirements of (a), (b) and (c) defaults to discretionary activity Rule 14-2A, not the restricted discretionary activity Rule 14-2.

treatment plant biosolids might be discharged to land (as a form of fertiliser or soil conditioner).

9. Within the structure of Chapter 14, the standards for discharge of biosolids (such as setbacks) are prescribed in Rules 14-7 (permitted activity) and 14-8 (restricted discretionary activity). None of the prescribed standards explicitly addresses setback from wāhi tapu. Therefore, addressing the request within Rules 14-1 to 14-2A would only address part of the apparent issue (it would only address the discharge of biosolids to land in association with existing IFLU activity in the target catchments). While the request is within the scope of PC2, it is only with respect to the those situations where the existing IFLU rules intersect with activities involving the discharge of biosolids.
10. All existing IFLU activities require consent and it may be possible to insert a reserved or discretionary matter in the controlled activity rule (Rule 14-1) and in the restricted discretionary activity rule (Rule 14-2) for existing IFLU. For example, that could be worded: 'Control is reserved over or discretion is restricted to: () *the minimum setback from any wāhi tapu of any discharge of grade As biosolid onto or into land*'. However, the expression wāhi tapu would need to be specified more precisely (by mapping or listing). In the absence of that, it would not be clear to applicants whether or where the standard applies and the rule would be potentially void due to uncertainty. I understand that the iwi authorities of the region are sent copies of all applications (including controlled activity applications) so there is probably a process already in place by which wāhi tapu of interest for individual IFLU applications could be alerted to Horizons. However, it is not apparent that this would be sufficient to provide the necessary certainty for applicants in the absence of a more defined data base. Also, the submission point is not specific as to minimum setback distance. Those details would need to be considered further at the hearing.
11. My conclusion is that insertion of a reserved or restricted discretionary matter addressing this point is within the scope of PC2 but would only partially address the issue. Further, I have some concerns over the certainty of any standards which required setbacks from sites that are not readily identified and in the absence of agreed setbacks. Greater certainty would need to be obtained through evidence at the hearing. My recommendation below is therefore subject to further information. In my opinion, a more comprehensive approach would be to consider how Rules 14-7 and 14-8 address this issue as part of the broader One Plan review Horizons is to undertake.

23.4 Recommendation – Discharge of Biosolids

12. For the reasons explained in paragraphs 3 to 10 above, I recommend that:
 - (a) Subject to further information at the hearing (as identified above), the Panel consider including in Rules 14-1 and 14-2 an additional reserved and discretionary matters:

'() the minimum setback from wāhi tapu of any discharge of grade As biosolid onto or into land'^

- (b) Submission point S85.1 be **accepted in part** or **rejected** depending on the Panel's conclusion on the merits of that insertion.

23.5 Ruapehu District Council's Requests (Submission S2)

13. Paragraphs 5.3 to 5.5 of Ruapehu District Council's submission (S2) recommend that:

5.3 ... pathways be created for new intensive farming land uses to meet the needs and expectations of the RMA through the One Plan.

5.4 Should HRC continue with the proposed changes of PC2, RDC recommends ensuring that local engagement takes place with stakeholders involved when setting the parameters of individual catchment developments and not taking a one size fits all approach.

5.5 To assist in clear local engagement, PC2 should provide clear guidance to decision makers in terms of permissible activities.

14. These points are captured as submission points S2.2, S2.3 and S2.4 in the PC2 published summary of submissions.
15. Submission point S2.2 addresses new IFLU activities and is not 'on' PC2 in my opinion. Submission point S2.3 seems to be suggesting an alternative approach to PC2 and, in this respect, is not 'on' PC2. Also, submission point S2.3 provides no detail about the alternative approach.
16. Submission point S2.4 seems to be suggesting that PC2 does not provide clear guidance on permissible activities. I have accepted in Chapters 9, 11 and 12 of this Section 42A Report that the PC2 provisions would benefit from some amendment to provide greater guidance to decision makers when considering applications for consent for IFLU activities that exceed specified limits. I have recommended amendments to PC2 to address that as well as alternative controlled activity consent pathways that specify clearly the N leaching reductions required from existing IFLU.

23.6 Ruapehu District Council's Requests (Submission S2)

17. For the reasons explained in paragraphs 12 to 15 above, I recommend that:

- (a) Submission points S2.2 and S2.3 be **rejected**; and

- i. Further submission points FS 19.2.2 and FS19.2.3 (Horowhenua District Council) be **rejected**; and
 - ii. Further submission point FS1.2.2 (Forest and Bird) be **accepted**; and
- (b) Submission point S2.4 be **accepted in part** for the reasons explained in Chapters 11 and 12 of this Section 42A Report; and
- i. Further submission points FS7.2.4 (Manawatū District Council) and FS19.2.4 (Horowhenua District Council) be **accepted in part**.

23.7 BakerAg (Submission S5.5)

18. BakerAg's submission point S5.5 requests that PC2 should be modified to clearly show the financial impact of the current One Plan rules versus PC2 rules. This is not necessary. These matters have been considered in the Section 32 Report and in the technical section 42A reports of Mr McNally and Mr Clough. For this reason, I recommend that submission point S5.5 be **rejected**.

23.8 Tararua District Council (Submission Points S79.1 and S79.3)

19. Tararua District Council's submission requested that the One Plan '*go into immediate review (Plan Change 3) following the completion of this Plan Change 2 review*'. It also requested that Horizons consider the implications of the Declaration Decision [2019, 136] for PC2. As explained in Dr Peet's section 42A report, Horizons is planning a review of the One Plan to address the requirements of the NPSFM 2020. Horizons had been planning a 'PC3' but I understand that this may now be superseded by the wider NPS-FM review. Horizons has considered the relevant Court decisions. For these reasons, I recommend that submission points S79.1 and S79.3 be **accepted in part**.

23.9 Andrew Day (Submission Points S53.3 – S53.5)

20. Andrew Day's submission points S53.3 and S53.4 request actions additional to PC2 which I consider are beyond the scope of PC2 (not 'on' PC2). Accordingly, I recommend that submission points S53.3 and S53.4 be **rejected**. For completeness, I also recommend that further submission points FS9.53.3 and FS9.53.4 be **accepted**.
21. Mr Day's submission point S53.5 addresses Horizons' enforcement functions, separate from PC2, and no decision is requested (or in my opinion, required).

23.10 Water Protection Society (Submission Point S65.2)

22. The Society's submission point S65.2 requests amendment to Policy 5-7. PC2 did not propose any changes to Policy 5-7 and I do not consider the requested relief to be within the scope of

PC2. Accordingly, I recommend that submission point S65.2 be **rejected** and that the further submission points be **accepted** or **rejected** as necessary.

24 Conclusion and Recommendations

24.1 Summary of Recommended Amendments to PC2

1. I collate together in **Attachment P** the amendments to PC2 that I recommend in the preceding chapters of this report. In summary, I recommend the following amendments:

Policy 5-8	(a) Delete the text that states that nitrogen leaching maximums 'will achieve' the RPS strategy for water quality improvement (as proposed by PC2) and to amend this to clarify that the nitrogen leaching maximums are intended to 'contribute' to achievement of the strategy; and (b) Amend 5-8(a)(i)(D) to clarify that the One Plan's expectation of existing IFLU activity is that the nitrogen leaching maximums will be achievable on most farms using <i>good management practices</i> and <i>best management practices</i>; and (c) Amend the 5-8(a)(iia) considerations to require that N leaching loss from existing IFLU activities is reduced to the maximum extent practicable in the shortest feasible time frame; (d) Insert into 5-8(a)(iia) additional considerations of the size of the individual existing IFLU activity's contribution to N leaching within the water management sub-zone, environmental effects, the timing of improvements, and LUC classification; and (e) Insert into 5-8(a)(iib) a requirement that transitioning IFLU activities complete their transition within five years (to reflect that same requirement in the Regional Plan Chapter 14 policy); and (f) Underscore the requirement in 5-8(d) that IFLU activities must, as a minimum, implement good management practices.
Methods 5-12:	(g) Clarify that the innovative land use research will include nitrogen loss mitigation options and include tangata whenua in the list of stakeholders who will participate in innovative land use research.
Method 5-13:	(h) Clarify that Horizons will include a method for accommodating Overseer upgrades and will update Table 14.2 to respond to significant changes in Overseer, through a plan change process, where necessary.
Policy 14-3:	(i) Insert 'additional measures' as well as 'good management practices';
Policy 14-5:	(j) Attempt to clarify the meaning of 'date of legal effect' (which is central to the definition of 'existing' and 'new' IFLU activity; (k) Retain the Table 14.2 CNLM threshold for controlled activity consent pathway and insert two additional, alternative, controlled activity consent pathways:

	1) Requiring that the IFLU activity adopts good management practice <i>and</i> best management practice and achieves N leaching that is the lesser of a reduction of 10%-20% or the 75th percentile N leaching rate for the relevant water management zone; and 2) A pathway tailored for commercial vegetable growing that requires no increase to the growing area (relative to a baseline growing period) and implementation of good management practice and best management practice to achieve a minimum N leaching loss of 35% relative to the baseline growing period, within three years; and (l) Require that, to qualify for controlled activity consent (by any of the three pathways), applications must be lodged no later than 31 December 2022.
Policy 14-6:	(m) Insert additional requirements to strengthen the policy framework, responding to suggestions made in submissions and to acknowledge the particular crop-rotation needs of commercial vegetable growing; and (n) Clarify the requirements for IFLU activities transitioning to other non-IFLU activities (to prevent resumption of the same IFLU activity in the future).
Rules:	(o) Insert two additional controlled activity consent pathways: as an alternative to compliance with Table 14.2, controlled activity provision for IFLU activities that: (1) implement good management practice and best management practice and thereby reduce their nitrogen leaching loss to the lesser of (a) a leaching rate that is 80% to 90% of the 2012/2013 baseline leaching loss or (b) the 75th percentile leaching loss for the relevant water management zone; or (2) for CVG, limits the growing area to the baseline growing period and requires the implementation of GMPs and BMPs to achieve, within 3 years, a minimum 35% reduction in nitrogen leaching loss; (p) requires applications for controlled activity consent for existing IFLU activities to be lodged within two years.
Definitions:	(q) Expand the definition of 'good management practices' by including a list of agreed GMPs and also include insert 'best management practice'; and (r) Adjust the definition of 'nutrient management plan' to clarify that it can be a chapter of a 'freshwater farm plan'; and (s) Insert definitions of 'baseline growing period' and '75th percentile leaching loss' for the purposes of the proposed alternative controlled activity consent pathways.

24.2 Section 32AA Requirements

2. Section 32AA(1) requires a further evaluation where changes are proposed to the proposal under consideration. This evaluation must be undertaken in accordance with section 32(1) to (4) and must be undertaken at a level of detail that corresponds to the scale and significance of the proposed changes. The relevant considerations in section 32(1) to (4) are:
- The 32(1)(a): the evaluation report must examine the extent to which the objectives of the proposed changes are the most appropriate way to achieve the purpose of the RMA;
 - 32(1)(b): the evaluation report must examine whether the proposed provisions are the most appropriate way to achieve the objectives (in this case, the 'objective' is the purpose of PC2), by reference to other reasonably practicable options and assessing the efficiency and effectiveness of the proposed changes in achieving the objective;
 - 32(1)(c): the evaluation report must contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from implementation of the proposed changes;
 - 32(2)(a) –(c): the assessment under (1)(b)(ii) must identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from implementation of the proposed changes, including opportunities for economic growth that are anticipated and employment; quantify the benefits and costs identified (if practicable); and assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the proposed changes;
 - 32(3)(b): the One Plan objectives must be considered to the extent that they are relevant to the objectives (in this case, the purpose) of the proposed change. In my opinion, the relevant objectives are 2-1 (have regard to mauri, recognise and provide for kaitiakitanga), 4-2 (land use and sedimentation), 5-1 (life-supporting capacity of water), 5-2 (maintain or enhance water quality to support Schedule B values) and 14-1 (management of discharges to land);
 - 32(4): applies where the proposed changes will impose a greater or lesser restriction on an activity to which a national environmental standard applies than the PC2 proposed provisions. This requirement has relevance in terms of Subpart 4 of the *Resource Management (National Environmental Standards for Freshwater) Regulations 2020* and the limits on the application of synthetic nitrogen fertilizer to pastoral land (which commenced on 3 September 2020), as well as restrictions on the intensification of some pastoral agriculture. Horizons is currently evaluating whether the PC2 and the amendments I propose to PC2 will be more or less stringent than the new Regulations. That work will not be complete in time for inclusion in this report. I will provide an update on this matter to the Hearing Panel at the hearing.

3. In addition, the evaluation should consider whether the proposed changes will assist Horizons to exercise its section 30 functions.
4. The changes that I propose to the PC2 provisions are a 'package'. They need to be taken as a whole. The evaluation that follows therefore considers them, as a whole, by comparison with PC2 (also as a whole package).
5. It is anticipated that any further changes that may be recommended to PC2 (in Horizons' reply) would be accompanied by an updated further section 32AA evaluation of those changes. It is appropriate to signal at this stage, however, the outcomes of the evaluation for the changes I have recommended to date. I would be happy to provide further advice on in relation to section 32AA if there are other amendments the Panel considers are necessary to the PC2 provisions.

24.3 Reasonably Practicable Options

6. The section 32 evaluation considered two alternatives ('status quo' and PC2). The evaluation under section 32AA requires a comparative assessment of the impacts of implementing the alternative options, to test which is superior. Accordingly, I have undertaken a comparative analysis of the package of amendments I propose, and PC2 (as publicly notified). I have also included as part of the comparative analysis the operative One Plan (because this is the relevant baseline, as agreed by the RMA Planners at expert conferencing⁸⁴).

24.4 Evaluation of Recommended Amendments to PC2

7. I set out in the left-hand column in the table below the considerations identified in Chapter 24.2 above. The second column summarises my assessment of the package of amendments I propose to PC2. The third column summarises my assessment of PC2. The far right column provides an assessment of the status quo Operative Plan provisions. The green shading in the table below indicates which of the options I consider to be more appropriate in terms of each consideration. Where all options are shaded green, it indicates my opinion that there is very little separating them, in terms of that particular consideration.

⁸⁴ Answer to Question 2, page 8, RMA Experts Joint Witness Statement 29 July 2020.

Evaluation Consideration:	Proposed Amendments to PC2:	PC2:	'Status Quo' Operative One Plan (with all remaining unconsented IFLU adhering strictly to Table 14.2)
Effectiveness in achieving the PC2 purpose:	Provides a selection of practicable, workable consent pathways for a range of IFLU activities.	Mostly effective but is still limited by a controlled activity pathway which remains challenging, including for CVG, and with GMP (as it is understood today) needing to be supplemented to ensure that Table 14.2 is achievable on most farms. The discretionary activity consent pathway is not perceived providing enough certainty, with complexity and costs.	Least effective: does not provide a viable consent pathway for CVG and is not achievable on most farms using only GMPs. There is no clear or certain restricted discretionary activity pathway for exceedance of Table 14.2.
Efficiency in achieving the PC2 purpose:	Improves certainty and efficiency and reduces consenting uncertainty and costs. Includes a requirement to lodge applications within two years which should enhance efficiency of achieving PC2 purpose.	Will likely require more discretionary activity applications, with attendant cost, uncertainty and limitations on efficient consenting process.	Least efficient: there is a high degree of uncertainty around the restricted discretionary activity pathway, with high consenting assessment and process costs if catchment-wide water quality outcomes are to be debated for each individual application, where it is difficult to attribute effects to individual farm N leaching.
Environmental benefits:	Controlled activity pathway is more likely to be attractive to IFLU businesses and more are expected to attempt this consent pathway. This leaves less uncertainty about exceedance. The N load scenario modelling indicates that the impact of reduced N leaching will be positive but small and similar to PC2. In both cases, the modelling is conservative in assuming that 'leaching up' to Table 14.2 will occur (which may not be possible under the NES-FM).	PC2 provides limited guidance on the extent of N leaching exceedance that will be considered appropriate through consenting process. This creates environmental uncertainty. The N load scenario modelling indicates that the impact of reduced N leaching will be positive but small. In this respect, there is little difference between PC2 and proposed amended PC2 amendments, in terms of water management sub-zone scale water quality improvement. In both cases, the modelling is conservative in assuming that 'leaching up' to Table 14.2 will occur (which may not be possible under the NES-FM).	The operative consented N modelling scenario is predicted to (theoretically) result in the least mean exceedance of Schedule E SIN targets. But the margin of difference between the operative consented scenario and the PC2 scenarios is relatively small compared to the size of the exceedance of the target values. And even smaller if, as is likely, no 'leaching up' is allowable under the NES-FM (if that is the case, the mean relative exceedance of the Schedule E targets would be very similar. ⁸⁵ Importantly, though, the operative One Plan is demonstrably not working as intended and therefore not achieving the theoretical water quality

⁸⁵ As demonstrated in the Land, Water, People report *Scenario Modelling of Nitrogen Management in Manawātū-Whanganui Region (Supporting Plan Change 2)* September 2020: Table 3: 34% for 'operative year-20 consented' and 35% for 'proposed consented strict'.

Evaluation Consideration:	Proposed Amendments to PC2:	PC2:	'Status Quo' Operative One Plan (with all remaining unconsented IFLU adhering strictly to Table 14.2)
			outcomes, with resultant economic and social costs and uncertainty.
Environmental costs:	Consenting regime will provide for N leaching from IFLU and activities will continue to contribute diffuse N to surface water and groundwater. Makes a contribution to reducing SIN in receiving environments (similar to PC2) but will not completely resolve degradation associated with diffuse IFLU leaching. Similar outcome for all options considered in 32AA.	Consenting regime will provide for N leaching from IFLU, and activities will continue to contribute diffuse N to surface water and groundwater. Makes a contribution to reducing SIN in receiving environments (similar to proposed amended PC2) but will not completely resolve degradation associated with diffuse IFLU leaching. Similar outcome for all options.	Consenting regime will provide for N leaching from IFLU and activities will continue to contribute diffuse N to surface water and groundwater. Makes a contribution to reducing SIN in receiving environments but will not completely resolve degradation associated with diffuse IFLU leaching. Would make the least contribution compared to both PC2 alternatives. Similar outcome for all options.
Economic benefits:	GMPs and BMPs will add to costs of production – benefits arise only in terms of economic activity consequential upon on-farm investment in GMPs and BMPs. This option provides greater certainty that those benefits can be realised (more viable consenting pathways).	GMPs and other on farm practices (BMP and innovation) will add to costs of production – benefits arise only in terms of economic activity consequential upon on-farm investment. Discretionary activity pathway improves some certainty of operation and economic outcomes but still relatively large number of IFLU reliant on discretionary process and consenting outcome.	GMPs and on farm practices (BMP and innovation) will add to costs of production – benefits arise only in terms of economic activity consequential upon on-farm investment. High degree of uncertainty about consenting outcome and whether economic benefits can be realised.
Economic costs (farm scale):	Economic costs of implementing GMPs and BMPs are not as critical as other variables beyond growers' control (market and global prices, seasonal variation). Controlled activity pathways potentially provide greater business certainty and involve less on-farm economic cost than PC2.	Economic costs of implementing GMPs and other on farm practices (BMP and innovation) are not as critical as other variables beyond growers' control (market and global prices, seasonal variation). Provision for a discretionary activity pathway reduces business uncertainty.	The cost of meeting the original table 14-2 in the operative One Plan (which had even lower CNLM) would have required more substantial farm changes, including reduction in overall productivity to get to point of compliance or transition out of that land use ⁸⁶ . Costs currently only being partially incurred due to widespread non-compliance.

⁸⁶ Stephen McNally section 42A report (Executive Summary).

Evaluation Consideration:	Proposed Amendments to PC2:	PC2:	'Status Quo' Operative One Plan (with all remaining unconsented IFLU adhering strictly to Table 14.2)
Economic costs (regional scale):	The cost of compliance is least, with more consenting pathways available.	The cost of compliance under PC2 is lower than for operative One Plan by such a wide margin that results would be robust against changes in input variables (costs of production). Compared to the current operative plan scenario (with low compliance rates), PC2 offers the prospect of environmental improvement at lower cost.	Incurs the highest compliance cost ⁸⁷ (if enforced, noting that there is poor compliance currently).
Social benefits and costs:	Provision for a controlled activity + discretionary activity pathway potentially reduces uncertainty and stress to a greater degree	Provision for a discretionary activity pathway reduces uncertainty and stress of current regulatory framework ⁸⁸ .	Strict adherence to Table 14.2 limits creates the greatest uncertainty and social disbenefits for farmers and communities.
Cultural benefits for tangata whenua:	The submissions suggest no benefits are derived; although water quality modelling does show marginal improvements in N loads, with resultant benefits to water quality/journey towards Schedule B values.	The submissions suggest no benefits are derived, although the water quality modelling does show marginal improvements in N loads, with resultant benefits to water quality/journey towards Schedule B values.	The submissions suggest that abandonment of PC2 and strict adherence to Table 14.2 will yield the greater cultural benefits (notwithstanding that this option does not completely resolve water quality degradation).
Cultural disbenefits for tangata whenua:	The submissions suggest that any consent pathway for N leaching loss creates cultural disbenefits to the extent that the regulatory framework does not completely resolve water quality degradation.	The submissions suggest that any consent pathway for N leaching loss creates cultural disbenefits to the extent that the regulatory framework does not completely resolve water quality degradation	The submissions suggest that adherence to Table 14.2 has the least cultural disbenefits (notwithstanding that it does not completely resolve water quality degradation).
Risks:	This option carries less risk for the environment and community than not acting (i.e. compared with status quo) because there is more certainty of outcome.	This option carries less risk for the environment and community than not acting (i.e. compared with status quo) because there is a discretionary pathway that could enable regulation (although the enforcement costs may be high).	This option carries the greatest risk because of the lack of certainty that consents can be obtained, that the inability to obtain consent will force widespread land use change and that continued inability to regulate effectively will fail to secure N leaching reductions or water quality improvements.

⁸⁷ Peter Clough section 42A report (Conclusion).

⁸⁸ Heather Collins section. 42A report.

Evaluation Consideration:	Proposed Amendments to PC2:	PC2:	'Status Quo' Operative One Plan (with all remaining unconsented IFLU adhering strictly to Table 14.2)
Will it assist exercise of s. 30 functions?	Yes – with a higher degree of certainty about the scope of N leaching that will be authorised by consent and by enabling regulation of IFLU and enforcement of the One Plan.	Yes – with a higher degree of certainty about the scope of N leaching that will be authorised by consent and by enabling regulation of IFLU and enforcement of the One Plan.	In theory 'yes' – in practice 'not at all'.
One Plan Objective 2-1 (implications for mauri, kaitiakitanga):	The submissions suggest there will be adverse effects for mauri but the consenting pathways require N leaching loss reduction which, cumulatively, must contribute to water quality improvement (Ton Snelder, Abby Matthews). This could be seen as supporting mauri and other cultural values – however the likely in-river difference is unlikely to be discernible.	The submissions suggest there will be adverse effects for mauri but the consenting pathways require N leaching loss reduction which, cumulatively, must contribute to water quality improvement (Ton Snelder, Abby Matthews). This could be seen as supporting mauri and other cultural values – however the likely in-river difference is unlikely to be discernible.	The submissions suggest this option will protect mauri (notwithstanding that the lack of compliance means that the water quality benefits and enhancement are not actually being realised). The benefits are theoretical but not actually being achieved.
One Plan Objective 4-2 (land use implications for sediment):	The regulatory framework requires all nutrients and sediment to be considered and GMPs applied to address other nutrients, faecal contamination and sediment.	The regulatory framework requires all nutrients and sediment to be considered and GMPs applied to address other nutrients, faecal contamination and sediment.	The regulatory framework is less explicit about requirements to address other nutrients, faecal contamination and sediment through the consenting process and NMPs.
One Plan Objective 5-1 (life-supporting capacity and values of water):	The consenting pathways will require N leaching loss reduction which, cumulatively, must contribute to safeguarding life-supporting capacity and other values. This option will achieve this with more certainty about the scope of N leaching reductions. However the impact is unlikely to be discernible in absolute terms	The consenting pathways will require N leaching loss reduction which, cumulatively, must contribute to safeguarding life-supporting capacity and other values - however the impact is unlikely to be discernible in absolute terms	The option is predicted to result in the least mean exceedance of Schedule E SIN targets. But the margin of difference between the operative consented scenario and the PC2 scenarios is relatively small compared to the size of the exceedance of the target values. And even smaller if, as is likely, no 'leaching up' is allowable under the NES-FM (if that is the case, the mean relative exceedance of the Schedule E targets would be very similar. ⁸⁹ Importantly, though, the operative One Plan is demonstrably not working as intended and therefore not

⁸⁹ As demonstrated in the Land, Water, People report *Scenario Modelling of Nitrogen Management in Manawatū-Whanganui Region (Supporting Plan Change 2)* September 2020: Table 3: 34% for 'operative year-20 consented' and 35% for 'proposed consented strict'.

Evaluation Consideration:	Proposed Amendments to PC2:	PC2:	'Status Quo' Operative One Plan (with all remaining unconsented IFLU adhering strictly to Table 14.2)
			supporting life-supporting capacity or the values of water as intended.
One Plan Objective 5-2 (water quality is maintained or enhanced where degraded):	The consenting pathways will require N leaching loss reduction which, cumulatively, must contribute to enhancing water quality where it is degraded (and may be greater if no 'leaching up' is able to occur in future). However the impact is unlikely to be discernible in absolute terms	The consenting pathways will require N leaching loss reduction which, cumulatively, must contribute to enhancing water quality where it is degraded (and may be greater if no 'leaching up' is able to occur in future). However the impact is unlikely to be discernible in absolute terms	The operative consented N modelling scenario is predicted to (theoretically) result in the least mean exceedance of Schedule E SIN targets. Importantly, though, operative One Plan is demonstrably not working and therefore not contributing to water quality enhancement as effectively as is necessary.
One Plan Objective 14-1 (management of discharges to land):	This option gives effect to the objective by controlling diffuse discharges from IFLU activities and will do so more effectively with more explicit limits on N leaching (by providing a controlled activity consent pathway incentive for adopting GMPs and BMPs)	This option gives effect to the objective by controlling diffuse discharges from IFLU activities	Theoretically, the operative One Plan provides the more stringent regulatory framework for managing diffuse discharges from IFLU activities if enforced strictly without resolving the issues with the policy framework. But its effectiveness is significantly impaired by the uncertainty and low level of compliance created by the internal policy/rule conflict.
Overall appropriateness in achieving the PC2 purpose:	This option is, overall, a more appropriate way of achieving the PC2 purpose.	This option will achieve the PC2 purpose but with a challenging consenting framework/	Completely ineffective (it is the problem being addressed by PC2).
Appropriateness in achieving PC2 purpose	This option will better enable existing land use, while minimising N leaching loss and adverse effects on the environment.	Mostly effective in achieving the PC2 purpose but with a challenging controlled activity pathway for CVG and some other IFLU who need more than GMP (as it is understood today) to meet Table 14.2.	This option will be, practically, least appropriate in achieving the RMA purpose (does not fully enable people and communities to meet their economic and social needs and does not protect water quality).

8. My conclusion is that the amendments I propose to PC2 will better meet the PC2 purpose, the purpose of the RMA and the relevant One Plan objectives than the operative One Plan or PC2.

24.5 Conclusion

9. The current One Plan provisions for the management of existing IFLU activities are not working as intended. The result is that there is a large number of existing IFLU activities operating without consent and without constraint on their N leaching. The absence of clarity in the One Plan regulatory framework means that there is also significant uncertainty for IFLU businesses and consequent stress amongst rural communities about their future prospects.
10. Diffuse N leaching from land use, including from IFLU activities, is identified as a contributor to the degradation of surface water and groundwater in the region. The One Plan's original, clearly stated, intention is that all existing IFLU activities would be regulated, to effect widespread improvement in farming and growing practices and contribute to reducing N loads in water bodies. The currently unconsented IFLU activities need to be regulated, to fulfil the original intention. Even if all remaining unconsented IFLU activities obtain consents and reduce their N leaching, the contribution to reducing N contamination in surface water and groundwater is predicted to be small. That was always the expectation when the One Plan first became operative. But every little bit helps. The overall strategy for water quality intends that all contributors will, over time, do their bit to ensure improvement in water quality. The converse, whereby no sector makes any change simply because the impact is so slight, would mean ultimately no improvement. It was never intended that management of IFLU through changes in farming practices would, alone, achieve the One Plan water quality targets.
11. There are also significant equity imbalances in a rural sector where some existing IFLU activities have absorbed the capital and operating costs of obtaining consents and others have avoided those costs and are prevented from obtaining consent by internal conflict within the regulatory framework.
12. The submissions on PC2 have raised some valid points about the lack of certainty of outcome in the PC2 provisions. In my opinion amendments are required to provide greater certainty of outcome for existing IFLU activities and about the likely scope of N leaching from existing IFLU activities in the future. I also consider that some urgency needs to be injected into PC2, by requiring that controlled activity applications for outstanding unconsented IFLU activities be lodged soon (by the end of 2022) and that they implement farm system practice changes, to reduce N leaching as soon as reasonably practicable.
13. I do not agree that PC2 should be abandoned, as requested by some submitters. Put simply, my view is that the sooner the regulatory framework can be resolved, the sooner Horizons and its community can again work towards achieving (even slight) improvements in water quality through this particular (interim) plan change. This is important because water quality degradation is such a big issue for this region.

14. PC2 is an interim initiative. Horizons has underway a wider review of the effectiveness of the One Plan and of what is required to implement the NPS-FM 2020. The provisions of PC2 will, naturally, be revisited in that process. That wider review must conclude with a publicly notified replacement freshwater Plan no later than 31 December 2024. Even for that short period, a settled regulatory framework for existing IFLU activities would make a difference. The PC2 provisions, once settled, will prevail throughout the future process of the wider review until the replacement Plan becomes operative. That process will take years. The period of influence of PC2 is not just the next four years – it is the period until Horizons and the Manawatū-Whanganui community settles on the replacement One Plan provisions. The responsible approach, in my opinion and in light of the significance of the need for water quality improvement and the need for certainty for existing IFLU activities, is to continue with PC2 and refine it in the best way possible to make the operative One Plan provisions as effective as practicable for that interim period.
15. For these reasons, and the reasons explained in Chapters 6 to 23 of this report, I recommend the Panel recommends to Horizons that:
- (a) PC2 be confirmed with the amendments I propose in **Attachment P**; and
 - (b) That submissions and further submissions be accepted, accepted in part or rejected as detailed in the table contained in **Attachment E1** for the reasons explained in this Section 42A report.
16. I fully expect that submitters will have different views about whether the amendments I propose are appropriate or go far enough. I look forward to engaging further with them, with a view to achieving workable provisions.

Christine Foster
(assisted by Lynette Baish and Melanie McCormick)
4 September 2020