Proposed Plan Change to clarify and amend One Plan provisions for existing intensive farming land use activities

Evaluation of Proposed Plan Change 2

2019

Executive Summary

The purpose of this report is to evaluate proposed "Plan Change 2", being related to changes to the Regional Policy Statement ("**RPS**") and Regional Plan components of the One Plan for the Manawatū-Whanganui Region ("**One Plan**"), in accordance with the requirements of section 32 of the Resource Management Act 1991 ("**RMA**"). Plan Change 2 has been proposed in order to address shortcomings identified in policy provisions and rules in the One Plan for managing existing intensive farming land use activities.

The One Plan was notified in 2007 and became fully operative 19 December 2014. It combined seven first generation regional plans into a single policy statement and regional plan for the Region.[1]

The RPS sets out the regionally significant resource management issues and outlines the objectives, policies and methods that will be used to address these issues, and as implemented through provisions in the Regional Plan.

Relevantly, Chapter 5 of the RPS identifies water quality degradation as a key issue in the Manawatū Region. Run-off and leaching from agricultural land is identified as one of the principle causes of this issue. In broad terms, the direction of the water quality objectives and policies in Chapter 5 is to 'maintain' water quality where it is currently good, and to 'enhance' water quality where it is currently poor.

Intensive farming land use activities (defined as commercial vegetable growing, cropping, dairy farming, and intensive sheep and beef farming) are dealt with in Policies 5-7 and 5-8 of the RPS. They provide for active management of existing intensive farming land use activities in targeted Water Management Sub-zones and new intensive farming land use activities everywhere in the Region.

These RPS level policies are implemented through policies and rules in Chapter 14 of the Regional Plan, *Discharges to Land and Water*.

One of the principal mechanisms of managing the effects of intensive farming land uses in the targeted sub-zones is through the cumulative nitrogen leaching maximums (in kg/ha/year) specified in Table 14.2. Table 14.2 was developed using the Overseer modelling software and was designed to allocate nitrogen leaching limits according to the productive potential of the land (this is known as the 'Natural Capital Approach'). Broadly, Chapter 14 provides that activities which comply with the table must be granted resource consent as a controlled activity, while resource consent for activities that do not meet the table must be sought as a restricted discretionary activity (so could be declined).

While this broad framework is still considered appropriate to implement the overall policy direction of the One Plan, in practice the provisions are no longer working as intended. This is a result of two external factors that have arisen since the One Plan became operative:

1. Ongoing changes in the Overseer model mean that farm systems that could have met the Table 14.2 maximums when modelled using Overseer version 5.2.6 (the version used to originally prepare the Table), no longer do so when modelled in

[1] The One Plan is the consolidated Regional Policy Statement, Regional Plan and Regional Coastal Plan for the Manawatū-Whanganui Region. http://www.horizons.govt.nz/publications-feedback/one-plan

Overseer version 6.3.1 (the current version); and even if nothing in real terms has changed in terms of farm practice. Effectively this means very few farms could now comply with the cumulative nitrogen leaching maximum limits in Table 14.2. As a result, Table 14-2 now fails to 'give effect to' the policy direction in the RPS that nitrogen leaching maximums set in the Regional Plan must be 'achievable on most farms using good management practices'.

2. In addition, applications for activities that do not meet Table 14.2 must now be considered in light of significant new RMA case law that has been determined since the One Plan became operative. These cases require the provisions to be applied in a way that may not have been anticipated when the One Plan was prepared, and in essence mean that directive policies in relation to 'achieving' (Policy 5-8) or 'not exceeding' (Policy 14-5) the limits in Table 14.2 now make it very difficult for resource consent to be granted in circumstances where the limits are not met. While in preparing the One Plan it was anticipated that resource consent could be granted for existing activities above Table 14.2 in some circumstances, it is now considered that the policy provisions do not provide a viable pathway for resource consent applications to follow.

The net result of this is that very few existing intensive farming activities can meet Table 14.2, and it is almost impossible for those that do not meet the Table to be granted resource consent (even if the land use has not substantially changed since the One Plan became operative). It is estimated that there are around 118 existing unconsented dairy farms within the region and around 60 horticultural operations in the Horowhenua targeted Water Management Sub-zones.

This position is unsatisfactory in and of itself, as it means that this activity is effectively not regulated by the RMA, with the absence of clear regulation through resource consent conditions meaning the improvements in freshwater quality are not necessarily being realised. In addition, the uncertainty for intensive land use farmers (dairy, sheep and beef, and horticulture) is having considerable social and economic effects.

In the circumstances, the Council is faced with difficulties in taking action to enforce compliance with planning regime that is no longer fit for purpose (i.e. given Table 14.2 cannot practicably be met, and resource consent cannot practicably be obtained for breaching it). Strict enforcement of the operative provisions (effectively the status quo) would have even greater social and economic effects, with potentially serious consequences for intensive farming businesses in the Manawatū-Whanganui Region.

Horizons proposes to address the issue through Plan Change 2. Plan Change 2 is aimed at enabling a return to "business as usual" regulation of intensive farming land uses under the RMA as soon as reasonably practicable. It does so by:

1. Updating the cumulative nitrogen leaching maximums in Table 14-2 to reflect improvements in the nutrient modelling software tool, Overseer;
2. Reinforcing Good Management Practices as part of intensive farming land use activities; and
3. Providing a workable pathway for landowners to apply for resource consent for intensive farming land use activities that cannot achieve Table 14.2 cumulative nitrogen leaching maximums.

As required by section 32 RMA, this report evaluates whether the objective (or purpose) of Plan Change 2 is the 'most appropriate' to achieve the purpose of the RMA. It is concluded that the objective is appropriate because it improves the workability of the intensive farming land use provision and in order to better achieve the intent of the One Plan.

The report goes on to examine whether the amendments to the One Plan proposed in Plan Change 2 are most appropriate to achieve the objective of the plan change, as well as the relevant objectives in Chapter 5 (for the RPS amendments) and Chapter 14 (for the Regional Plan amendments), by (in summary):

- Identifying other reasonably practical options for achieving the objectives;
- Assessing the efficiency and effectiveness of the proposed Plan Change 2 amendments in achieving the One Plan and Plan Change 2 objectives, by:
    - Assessing the benefits and costs of the various effects anticipated from the implementation of the provisions (including in terms of opportunities for economic growth and employment); and
    - Assessing the risks of acting or not acting in the face of uncertain information.

In summary, in relation to those matters:

- In addition to the three components of Plan Change 2, other key alternative options considered were to 'do nothing', and to wait for an alternative mechanism for managing the effects of the intensive farming land uses to be developed through the *Our Freshwater Futures* programme. Neither option was considered appropriate. In terms of the 'do nothing' option, it was not considered appropriate for the Council to allow existing unconsented intensive farming operations to continue indefinitely by not enforcing operative provisions of the One Plan (including in terms of the general duties on councils to enforce their plans under section 84 RMA). On the other hand, it was considered that enforcing the operative provisions would have significant social and economic costs, and would in the circumstances be unfair, so would also not be 'most appropriate'. While there is potential for a new regime (potentially with catchment-based limits) to be developed through *Our Freshwater Futures*, any new regime would still be at least four years away. In the circumstances it was not considered appropriate to delay action in order to wait for this to occur (leaving existing farmers in 'limbo' and foregoing environmental gains that could be made through proper regulation). In addition, Plan Change 2 is effectively an update or recalibration of the existing provisions, and does not preclude a more refined (e.g. catchment-specific) regime being introduced in the future.
- The Plan Change 2 provisions were considered the most effective and efficient option in achieving the relevant objectives when considering the social, economic, environmental, cultural effects, alongside economic growth and employment opportunities. .
- While there is some uncertainty associated with the modelling of nitrogen leaching maximums through Overseer, for the purpose of this plan change (acknowledging future plan change work through *Our Freshwater Futures*), the information is not so insufficient as to delay action, and the costs of doing nothing outweigh the benefits.

1. Introduction

1.1. Purpose of report

Manawatū -Wanganui Regional Council (Horizons) has prepared Plan Change 2 – Intensive Farming Land Use Activities - to the Operative One Plan for notification under the RMA.

Plan Change 2 is proposed to address shortcomings identified in policy provisions in the One Plan for managing existing intensive farming land use activities.

This Section 32 evaluation report has been prepared to accompany Plan Change 2. It summarises the evaluation of alternatives, costs and benefits undertaken by Horizons in respect to the proposed One Plan provisions relating to existing intensive land use farming activities. In summary, Horizons must establish that the Plan Change is the most appropriate way to achieve the purpose of the Act, including an assessment that the proposed changes are the most appropriate means available to achieve Horizons objectives – when compared against alternative methods available, including doing nothing (the 'status quo' option).

The intention of this report is to:

- Explain why Plan Change 2 is needed (the objectives of the Plan Change);
- Evaluate the objectives;
- Identify the potential options to address the issues;
- Evaluate the options; and
- Record why the proposed plan change is the most appropriate way to achieve the objectives of Plan Change 2, as well as the relevant objectives in the RPS and Regional Plan (together known as the "One Plan")).

This report fulfils the requirements of section 32 of the Resource Management Act.

1.2. Overview of proposal

The purpose of Plan Change 2 is to address issues with the One Plan provisions for controlling existing intensive farming land use activities. While at a high level the existing approach is still considered appropriate to implement the overall policy direction of the One Plan, some of the provisions are no longer working as intended when the One Plan was introduced. Practically speaking it is no longer the case that the nitrogen leaching maximums identified in Table 14-2 (Chapter 14) of the One Plan are achievable 'on most farms using good management practices' (as anticipated by Policy 5-8), with there being only a very limited pathway (if any) for those activities which exceed Table 14-2 to seek resource consent under the existing provisions.

Plan Change 2 therefore proposes to:

- Update the cumulative nitrogen leaching maximums in Table 14-2 to reflect improvements in the nutrient modelling software tool, Overseer;
- Reinforce Good Management Practices as part of intensive farming land use activities;
- Providing a workable pathway for landowners to apply for consent for intensive farming land use activities that cannot achieve Table 14.2 cumulative nitrogen leaching maximums.

More detail on the drivers for Plan Change 2 is contained in section 4.

However, one overarching driver is timeliness, on the basis that:

- It is important that any changes to the One Plan are made as soon as reasonably practicable, so that existing intensive farming land use activities can be granted consent (or, in some cases, consent is declined) to resolve the current uncertainty (which is already having social and economic impacts in and of itself);
- The changes in farming practice necessary to obtain resource consent and/or comply with consent conditions will drive water quality improvements in targeted Water Management Sub-zones as intended through the objectives of the One Plan (which are not currently being realised with existing intensive farming land use activities).
- There are both practical difficulties and issues of fairness associated with enforcing the operative provisions, when there is no means to comply with Table 14.2 and no viable pathway to seek consent to exceed it. As such, Horizons is currently focussed instead on addressing the issues with the planning framework. However, there is growing pressure to take enforcement action and it is recognised that unconsented activities should not be allowed to continue indefinitely.

For all these reasons, changes are required to the One Plan to enable a return to "business as usual" regulation of intensive farming land uses as soon as reasonably practicable

For the avoidance of doubt, Plan Change 2 does not introduce or change any of the objectives of the One Plan relating to the management of freshwater quality in the Manawatū-Whanganui Region. It relies on existing objectives within the RPS and Regional Plan.

Plan Change 2 only seeks to address the policies and methods (including rules) relating to existing intensive farming land use provisions. The underlying approach to management of these activities remains the same, with the changes proposed to only improve implementation (by updating Table 14-2 in light of changes to Overseer and updating the relevant policies in light of changes in RMA case law).

2. Statutory and Planning Framework

This section sets out the key legislative and planning context for Plan Change 2.

2.1. National Context

Resource Management Act 1991

Horizons has a responsibility to give effect to the RMA through its RPS and Regional Plan. With respect to water quality, the following provisions (among others) assume relevance:

- Section 5 - to promote the sustainable management of natural and physical resources while "safeguarding the life-supporting capacity of air, water, soil and ecosystems". Supported by ss 6, 7, and 8, with various matters Horizons must recognise and provide for in this process.
- Section 30 of the RMA gives Horizons, amongst other things, the functions of controlling the use of land for the purpose of maintenance and enhancement of the quality of water in water bodies and coastal water (RMA, s 30(1)(c)(ii)), and discharges to water and land (RMA s 30(1)(f)).
- Sections 9, 12, 13, 14 and 15 of the RMA are all relevant to managing activities that impact on water quality and values of water.
- Sections 62 and 67 set out the matters for inclusion in the RPS and Regional Plan.

National Policy Statement for Freshwater Management ("NPSFM")

Freshwater management at a national level is informed by the National Policy Statement for Freshwater Management 2017 ("**NPSFM"**). This sets out objectives and policies for the management of water quality through an objective, target and limit setting process. This includes bottom lines for two compulsory values – ecosystem health and human health for recreation – and minimum acceptable states for other national values.

At a broad level the RPS and Regional Plan are required to 'give effect to' the NPSFM (s 67(3)(a), and 62(3)).

The One Plan is considered to meet most of the NPSFM's requirements. It identifies community values and numerical objectives and takes an integrated approach to improving water quality. The main requirement of the NPSFM that the One Plan does not address is catchment limits, which link instream outcomes with the impacts of resource use.

In order to address this, and other, NPSFM requirements, Horizons is undertaking a catchment-based approach to future freshwater planning across the Manawatū-Whanganui Region. The *Our Freshwater Futures* programme will review and refresh freshwater management in the Region and future align the One Plan with the NPSFM. As informed by community consultation, catchment strategies will confirm intended outcomes, determine limits and timeframes, and develop solutions that integrate regulation, funding and economic incentives, education, and locals' enthusiasm for their environment.

Consistent with Part E of the NPSFM, Horizons has a progressive implementation plan to meet the statutory timeframes as part of a staged approach to investigation and to make or change the One Plan so that the objectives are in accordance with NPSFM approach.

Given its scope Plan Change 2 will not fully give effect to (or at least not fully implement) the NPSFM. Instead this will occur through the staged implementation plan to 2025. However, the proposed plan change provisions have been prepared so that they do not 'run counter' to or preclude giving effect to the NPSFM.

2.2. Regional Context

The One Plan is the Regional Policy Statement, Regional Plan and Regional Coastal Plan for the Manawatū-Whanganui Region. Plan Change 2 is a change to the RPS and the Regional Plan, which is intended to be complementary to existing objectives within the One Plan. Consistent with s 62(3) of the RMA, it is focused on giving effect (in part) to the NPSFM, and, to the extent it involves a change to the Regional Plan, the RPS.

More detailed review of the One Plan will occur over the next few years, mostly as part of the Our Freshwater Futures Programme, to address a number of matters, including shortcomings identified in provisions relating to new intensive farming land uses, setting limits and targets to further address the National Policy Statement for Freshwater Management (as part of community-based catchment reviews), the outcomes of future topic based evaluations of the One Plan provisions, and responses required to implement national planning standards.

One Plan Part I – The Regional Policy Statement

The RPS sets out the regionally significant resource management issues and outlines the objectives, policies and methods that will be used to address these issues.

Chapter 5 identifies water quality degradation as a key issue. Run-off and leaching from agricultural land is identified as one of the principle causes of this water quality issue.

In broad terms, the water quality objective of the RPS is to maintain good water quality and enhance poor water quality. The policy framework to support this is set out in Policies 5-2, 5-3, 5-4, 5-5 and 5-6. The spatial units for water quality management are Water Management Sub-zones. Surface water management values and management objectives are set for each Water Management Sub-zone and numerical surface water quality targets are set for key contaminants in each Sub-zone.

Intensive farming land use activities are dealt with in Policies 5-7 and 5-8. They provide for active management of existing intensive farming land use activities in targeted Water Management Sub-zones and new intensive farming land use activities everywhere in the Manawatū-Whanganui Region. Targeted Water Management Sub-zones are those where land use activities are a significant contributor to elevated contaminant levels in groundwater and surface water. The contaminants of concern are identified in the RPS as nutrients (nitrogen and phosphorus), pathogens and sediment.

One Plan Part II – The Regional Plan

The Regional Plan specifies the regulatory controls on natural and physical resource use through its objectives, policies and regional rules. Chapter 14 *Discharges to Land and Water*, is the component of the Regional Plan which principally gives effect to the RPS objectives and policies for water quality set out in Chapter 5.

The Regional Plan regulatory framework includes policies and rules for intensive farming land use activities. These are defined as commercial vegetable growing, cropping, dairy farming, and intensive sheep and beef farming. Existing intensive farming land use activities in targeted

Water Management Sub-zones and new intensive farming activities anywhere in the Manawatū-Whanganui Region have been regulated since the One Plan became operative.

There are 29 targeted Water Management Sub-zones. These are the ones where such activities have been identified as making a significant contribution to elevated contaminant levels found in groundwater or surface water. They are detailed in Table 14.1 of the One Plan.

Table 14-2 sets the cumulative nitrogen leaching maximums for any given intensive farming land use activity. The allocation of nitrogen from intensive farming land use activities is based on a natural capital approach. Details of this approach can be found in a technical report prepared for Horizons in 2007[2]. It is also explained further in section 4.2 of this report.

The primary advantage of the natural capital approach is that nitrogen loss allocation is based on the productive potential of the land, rather than the existing use of the land. At the time the One Plan was introduced that meant that a farmer under-utilising the productive potential of the land should have had an opportunity to intensify. Conversely a farmer exceeding the productive potential of the land should have been taking steps to reduce nitrogen leaching back to the maxima set by Table 14.2, with the opportunity to apply for resource consent for the activity if it was considered appropriate. This approach was considered by the courts to represent sustainable management of natural resources at the time. As it has come to bear the rule and policy framework within the One Plan has not given effect to this approach in the manner intended by all parties at the time.

Intensive farming land use activities are Controlled Activities when Table 14.2 cumulative nitrogen leaching maximums are achieved along with other conditions, standards and terms defined in:

- Rule 14-1 for existing intensive farming land use activities in targeted Water Management Sub-zones; and
- Rule 14-3 for new intensive farming land use activities throughout the Region.

New and existing intensive farming land use activities that cannot achieve Controlled Activity status are classified as restricted discretionary activities under Rules 14-2 and 14-4 respectively. One matter for discretion in Rules 14-2 and 14-4 is "the extent of non-compliance with the cumulative nitrogen leaching maximum specified in Table 14.2."

When making decisions on consent applications for intensive farming land use consent applications, guidance is to be taken from Policies 14-5 (Management of intensive farming land uses) and 14-6 (Resource consent decision-making for intensive farming land uses). These policies direct that intensive farming land use activities must meet Table 14-2 (See section 4.2).

Policy 14-9 (Consent decision-making requirements from the National Policy Statement for Freshwater Management) is also a relevant decision-making matter for consideration.

[2] Carran, A, Clothier, B, MacKay, A and Parfitt, R, 2007: Appendix 6 – Defining nutrient nitrogen) loss limits within a water management zone on the basis of the natural capital of soil. An appendix to the Farm Strategies for Contaminant Management report by SLURI, the Sustainable Land Use Research Initiative, for Horizons Regional Council, June 2007.

2.3. Plan Change Development

In 2019 Horizons resolved to commence a change to the One Plan to address issues with consenting existing intensive farming land use activities under the One Plan. This decision followed on from discussions with the Ministry for the Environment (MfE) and its independent advisors (legal and planning) on consenting pathways for Dairy and Horticulture Activities (the "**MfE Independent Advice**")[3], Iwi, key stakeholders,[4] and a detailed s 35 report.[5]

The independent review confirmed:[6]

- Recent changes in the Overseer model outputs had resulted in an increase in farms that would not meet the cumulative nitrogen leaching maximums in Table 14-2 (in some catchments) to such an extent that it was no longer the case that those maximums would be achievable on 'most' farms using good management practices.

- While the rules of the One Plan contemplate a consenting pathway for an existing intensive farm land use above the cumulative nitrogen leaching maximums in Table 14-2, the policies of the Regional Plan significantly limit the circumstances where an exception to meeting the modelled nitrogen leaching limits can be assessed. There are only limited (and potentially not practicable) circumstances where such a consenting pathway exists, with the current policy regime of the Regional Plan not seeming to anticipate that applications be granted where the proposed activity does not "comply" with the nitrogen leaching maximums set in Table 14.2."

While Horizons had given detailed consideration to a plan change to only update the Overseer model outputs for the cumulative nitrogen leaching maximums in Table 14-2, Council resolved to investigate a slightly broader plan change in light of the recommendation in the MfE Independent Advice that "amendments are required to Regional Plan Policies 14-5 and 14-6, to assist applicants and processing planners on the specific management directions or outcomes being sought for the matters of discretion for the rules (e.g. Rule 14-2), and that these are best considered as a single plan change given their interrelated nature."[7]

Preparation of Plan Change 2 has also been informed by technical work undertaken by Horizons and its consultants since about 2017, spanning environmental, social and cultural and economic information about the intensive farming provisions and in particular, compliance with, or exceedance of, the cumulative nitrogen leaching maximums in Table 14-2.

A section 35 Report (July 2018) was also informative in identifying the resource management issue; in essence the 'road blocks' preventing the intensive farming land use activity provisions from achieving the water quality objectives of the RPS.

2.4. Consultation

[3] Ellis Gould, "Independent Planning and Legal Advice on the Manawatū -Whanganui Regional Council One Plan – Consenting Pathways for Dairy and Horticulture Activities", 20 November 2018.
[4]See Appendix E.
[5] [Insert FN for s 35 report].
[6] Ellis Gould, "Independent Planning and Legal Advice on the Manawatū -Whanganui Regional Council One Plan – Consenting Pathways for Dairy and Horticulture Activities", 20 November 2018 page 7.
[7] Ibid, page 2.

Clause 3 of the First Schedule identifies the people who must be consulted with in preparation of Plan Change 2. A range of consultation and information sharing initiatives (including workshops and one on one meetings) have been carried out as part of the plan change preparation process. This includes meetings with key stakeholders at different times, such as the MfE, Horticulture New Zealand, Federated Farmers, Fish and Game, EDS, various interest groups, and territorial authorities.

A summary of stakeholder consultation is attached in **Appendix D.** Common themes in feedback from consultation have been:

- Support for recalibrating Table 14.2 cumulative nitrogen leaching maximums;
- Concern about how future Overseer updates will be dealt with if they compromise the ability of intensive farming land users to achieve even the updated (recalibrated) Table 14.2 cumulative nitrogen leaching maximums;
- Concern about the fate of intensive farming land users that cannot achieve updated (recalibrated) Table 14.2 cumulative nitrogen leaching maximums;
- Uncertainty for dairy farmers and commercial vegetable growers that require a resource consent not having a pathway to apply for one;
- The perception that farmers in the Tararua District are "targeted" because they are poorer performers than other farmers in the Region;
- Effect of property values, e.g. dairy farms without a resource consent valued as though they are sheep and beef operations;
- Frustration and stress of effectively being in "limbo" until issues with the current provisions are resolved.
- Enforceability of current intensive farming land use provisions; and
- Concern from dairy farmers that hold a current resource consent about the positive or negative effects of future regulation on those consents.

Horizons has responded to stakeholder feedback in Plan Change 2 by:

- Proposing plan change provisions that address concerns about compliance with Table 14.2 and providing a policy mechanism for decision-makers to take account of the effect of Overseer changes on achieving cumulative nitrogen leaching maximums;
- Proposing plan change provisions that provide a consenting pathway for intensive farming land users that cannot achieve Table 14.2 cumulative nitrogen leaching maximums; and
- Addressing concerns over uncertainty, frustration, stress, and enforcement risk by proposing provisions which can result in change as soon as practicable.

2.5. Tangata Whenua Consultation

It is understood that there are 24 Iwi rohe in the Region. Hapū and Iwi are an integral part of the regional community. They have a role as Kaitiaki in the Region. Some are also significant land owners and contribute to the economy.

Consultation with Iwi began in early August 2018 once it was clear that re-calibration of the cumulative nitrogen leaching maximum in Table 14-2 was a potential plan change option. Consultation was segmented into Iwi whose rohe included targeted Water Management Sub-zones and those that did not. Ngā Tāngata Tiaki were consulted in respect of Te Awa Tupua. This segmentation of Iwi groups was made on the basis that the most significant impact of the plan change occurred in targeted Water Management Sub-zones.

Generally, Iwi have neither outwardly supported nor opposed the idea of recalibrating Table 14.2 so long as the water quality objectives (maintain good water quality, enhance poor water quality) in the One Plan are not part included within the scope of the plan change proposal. It was clear at meetings with all Iwi that participating in the development of freshwater strategies under the *Our Freshwater Futures* programme was a key focus for Iwi, with the opportunities it presented to review any concerns they have about the One Plan, including the management of freshwater quality, as a whole. More generally, there has been some limited discussion regarding the exceedance of Table 14-2 and the more workable consenting pathway.

Some feedback was beyond the scope of the proposal. One Iwi was concerned that the One Plan enabled the establishment of new intensive farming land uses in their rohe. Another group of Iwi was concerned that the potential for greenhouse gas emissions was greater under the updated Table 14-2, than modelled under previous versions of Overseer.

Consultation with Iwi in the development is on-going and it is anticipated that further discussions will occur regarding the proposed provisions and supporting analysis prior to notification. However, in response to matters of interest to Iwi so far, Plan Change 2:

- Introduces no changes to the objectives in the RPS and / or Regional Plan; and
- Makes clearer the (previously implicit) requirements for Good Management Practice for any intensive farming land use activity.

2.6 Supporting Technical Evidence

In considering and preparing Plan Change 2, Horizons has either completed reports or commissioned technical reports and supporting documents.

A list of the technical reports is attached as Attachment B. These reports are available on Horizons' website at: http://www.horizons.govt.nz/publications-feedback/one-plan-reviews-changes/nutrient-management

Plan Change 2 does not introduce or change any objectives and seeks to improve implementation of the existing One Plan framework for managing intensive farming land use activities. Therefore, evidence generated during development of the One Plan, Council hearings, and Environment Court hearings is also relevant, and has been relied on in preparation of the plan change. This information, along with the decisions of the Council hearing panels, Environment Court and High Court can be found on Horizons website at: http://www.horizons.govt.nz/publications-feedback/one-plan-documents

3. Resource Management Issue

3.1. Current freshwater state and trends

It was established during development of the One Plan that nutrients, pathogens and sediment were causing declining water quality in the Region. Run-off from agricultural land was identified as one of the main causes of degradation. This remains the case in 2019.

Water quality degradation from nutrients, pathogens and sediment is a national issue. The 2019 state of environment report for New Zealand, *Environment Aotearoa 2019*[8] finds that:

> "*Waterways in farming areas are polluted by excess nutrients, pathogens and sediment. This threatens our freshwater ecosystems and cultural values and may make our water unsafe for drinking and recreation*."

The most recent reporting[9] on state and trends of water quality in the Manawatū-Whanganui Region confirms that nutrients, pathogens and sediment are still causing degradation of water quality, and in particular in the Water Management Sub-zones targeted by the regulation of existing intensive farming land use.

1.2. One Plan Response

The One Plan identifies water quality degradation as one of the four keystone environmental issues. The One Plan (Chapter 5) states that:

> *"Run-off of nutrients, sediment and bacteria from farms is the single largest threat to water quality in the Region. Some water bodies are deemed unsuitable for swimming or food gathering, and aquatic life is being damaged."*

The One Plan seeks to manage this issue through managing sources of diffuse discharge of contaminants (nutrients (nitrogen and phosphorous), topsoil and sediment erosion, etc) from intensive farming land uses. In doing so, the policies are to give effect to the water quality objectives to maintain or enhance freshwater quality in order to safeguard life-supporting capacity and recognise and provide for the freshwater values (Schedule B) of the community.

Plan Change 2 does not seek to alter the One Plan objectives responding to the above resource management issue. Instead Plan Change 2 proceeds on the following basis:

- The current resource management issue related to water quality identified in One Plan Chapter 5 (Water) remains valid;
- The objectives in Chapter 5 address this issue;
- Schedule B values and Schedule E targets remain valid;
- The policies in Chapter 5, specifically those relating to water quality remain valid, except for Policy 5-8 which is specifically directed to intensive farming land use activities;
- Intensive farm land use activities as defined under the One Plan will continue to be regulated under Chapter 14 through a nitrogen allocation framework (including the natural capital approach which is unchanged) and within the targeted Water Management Sub-zones identified in Table 14.1;

[8] Ministry for the Environment & Stats NZ, (2019): *Environment Aotearoa 2019*. New Zealand's Environmental Reporting Series. Published by Ministry for the Environment and Stats NZ, April 2019.
[9] Fraser, C and Snelder, T, (2019): *State and Trends of River Water Quality in the Manawatū-Whanganui Region*, prepared for Horizons Regional Council, Report No. 2018/EXT/1619, November 2018.

- The rules relating to **new** intensive farming land use activities are unchanged.

A number of these wider issues, objectives and policies will be reviewed when considering the framework for freshwater management as part of the *Our Freshwater Futures* programme. It is likely that matters relevant to the intensive farming land use framework will be revisited at a broader level at this time, including the appropriateness of the natural capital/LUC approach, the range of water management sub-zones and target catchments, the appropriateness of regulating additional intensive land uses, and management of other contaminants of concern.

Plan Change 2, with its focus on addressing matters of implementation (of the One Plan), does not intend to address these issues or pre-empt the outcome of the catchment strategy reviews as part of the *Our Freshwater Futures* programme.

3.3 Cultural Matters

Any activities which impact on water quality improvements anticipated when the One Plan was developed will be of interest to hapū and Iwi.

An overview of consultation with Iwi and Horizons response is outlined in section 2.5.

One Plan

Chapter 2: Te Ao Māori in the One Plan deals with the resource management issues of significance to hapū and Iwi and sets out how the issues will be addressed. Water quality and demand, land use and management, indigenous habitat and biodiversity, research, and monitoring and enforcement were highlighted as overarching issues.

One Plan Objective 2-1 sets long-term goals for having regard to mauri and particular regard to kaitiakitanga in resource management planning. Key issues identified by hapū and Iwi as part of consultation on the One Plan and over the duration of the plan to date include:

- Management of water quality and quantity throughout the Region does not provide for the special qualities significant to Māori (Issue 2-1(a));
- Hazardous substances and nitrate run-off need to be better managed to avoid contaminants entering water (Issue 2-1(b));
- Lakes and streams (for example, Punahau/Waipunahau (Lake Horowhenua and Hokio Stream) have suffered degradation which continues and are considered culturally unclean (Issue 2-1(c));
- Access to and availability of clean water to exercise activities such as food gathering and baptismal rituals have diminished (Issue 2-1(d)); and
- Adverse effects of land use continue to have a detrimental effect on traditional food gathering areas, native habitats and ecosystems (Issue 2-2(k)).

The issues identified in Chapter 2 are cross-referenced to the resource based chapters where the policy provisions to address them lie. These include cross references to the Intensive farming land use provisions in Chapter 5 of the RPS and Chapter 14 of the Regional Plan. This integrated approach means that provisions such as those to manage intensive farming land use are intended to contribute to water quality improvements and enhancement of mauri.

Taiao Management Plans

Some Iwi and collectives in the Region have developed taiao management plans. These are individual expressions of kaitiakitanga for each Iwi or collective. These plans, in general, have a similar underlying philosophy. It is to protect the mauri and enhance mana o te wai to provide for cultural and spiritual practices, mahinga kai and taonga species.

Taiao management plans for the Region so far are:

- Ngāti Rangi Taiao Management Plan
- Ngaa Rauru Kiitahi Puutaiao Management Plan
- Te Kāuru Eastern Manawatū River Hapū Collective Te Kāuru Taiao Strategy
- Ngāti Maniapoto Ko Tā Maniapoto Mahere Taiao
- Ngati Tuwharetoa Iwi Environmental Management Plan
- Ki Uta, Ki Tai, Ngā Puna Rau o Rangitīkei, Catchment Strategy and Action Plan

These taiao management plans can be found on Horizons website here: http://www.horizons.govt.nz/about-our-region-and-council/Iwi-and-hapu/Iwi-and-hapu-management-plans

Other Legislation

To date seven Treaty claims settlements have been completed by Iwi with rohe in the Manawatū-Whangnaui Region. These are:

- Ngaa Rauru Kiitahi Claims Settlement Act 2005;
- Ngāti Apa (North Island) Claims Settlement Act 2010;
- Ngati Toa Rangatira Claims Settlement Act 2014;
- Rangitāne o ManawatūClaims Settlement Act 2016;
- Te Awa Tupua (Whanganui River Claims Settlement) Act 2017;
- Rangitāne Tū Mai Rā (Wairarapa Tamaki nui-ā-Rua) Claims Settlement Act 2017; and
- Ngāti Tūwharetoa Claims Settlement Act 2018.

The signed deeds of settlement can be found here: http://www.horizons.govt.nz/about-our-region-and-council/Iwi-and-hapu/treaty-settlements. Statutory acknowledgements relating to deeds of settlement can be found here: http://www.horizons.govt.nz/about-our-region-and-council/Iwi-and-hapu/statutory-acknowledgements.

Mana Whakahono a Rohe

There are no Mana Whakahono a Rohe agreements established for the Manawatū-Whanganui Region at this time.

2. Why is a plan change needed?

4.1. Problem identification

The One Plan has been operative since 19 December 2014. Experience has revealed that the parts of the One Plan intended to manage the effects of intensive farming land use are not working as intended. As a consequence, there is uncertainty around consenting and regulating existing intensive farming land use activities within the Region.

The primary issue is that the policies supporting the management of intensive farming land use to reduce nutrients, sediment and pathogens getting into groundwater and surface water are not working in the manner intended at the time the One Plan was made operative. 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 under the One Plan.

The reality with changes in Overseer is that very few intensive farming land use activities can meet Table 14-2 in its current form. As canvassed already in this report, a further complication is that the policy framework does not support a consenting option for those activities above the cumulative nitrogen leaching maximums under Table 14-2.

These issues have been well articulated through the following documents:

- Horizons initial evaluation of the nutrient management and water quality provisions in the One Plan[10];
- A detailed (section 35) evaluation of the intensive farming land use provisions[11]; and
- Independent planning and legal advice on the One Plan consenting pathways for dairy and horticulture activities[12].

The reader is referred to the original reports for details at http://www.horizons.govt.nz/publications-feedback/one-plan-reviews-changes/nutrient-management.

Problems with implementation mean that existing intensive farming land uses that need resource consent have not always been obtaining the necessary authorisations under the One Plan and Horizons has been unable to properly enforce its One Plan, pending a plan change to put in place a more workable framework.

4.2. Issues caused by Overseer updates

Table 14-2 in the One Plan sets cumulative nitrogen leaching maximums (kg/ha/year)[13] through Overseer. These maximums are intended to allocate nitrogen leaching according to the productive potential of the land. This is otherwise known as the Natural Capital Approach.

[10] Horizons Regional Council, 2017: "*Evaluation Report: Nutrient Management and Water Quality*," Strategy & Policy Committee agenda, Report No 17/57, Executive Summary, 12 April 2017.
[11] Hill Young Cooper. *Manawatū -Wanganui Regional Council One Plan Section 35 Report: Intensive Farming.* (July 2018), p11.
[12] Kirman C and Linzey A, 2018: "*Independent Planning and Legal Advice on the Manawatū-Whanganui Regional Council One Plan – Consenting Pathways for Dairy and Horticulture Activities,*" Ministry for the Environment, 20 November 2019.
[13] Cumulative nitrogen leaching maximums are defined in the One Plan as "*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*".

The allocation of nitrogen loss based on natural capital was identified in a report prepared for Horizons in 2007[14]. Since 2007 the cumulative nitrogen leaching maximums (kg/ha/year) in Table 14.2 have become out of date through version changes to improve Overseer. Table 14.2 was established using Overseer version 5.2.6. There have been at least eight version changes of Overseer, incorporating advances in agricultural science and technology since that time.

The effect of changes on cumulative nitrogen leaching maximums has been evaluated.[15] It was concluded that the cumulative nitrogen leaching maximums calculated using version 6.3.1 are 41 to 66% higher than those currently set in Table 14.2. In effect, the older version of Overseer simply underestimated the nitrogen leaching occurring from the land.

As a result:

- Many farm systems that could meet Table 14.2 cumulative nitrogen leaching maximums when modelled using Overseer version 5.2.6, no longer do so when modelled in Overseer version 6.3.1. This change in compliance occurs independently of any change in farm practice.
- The change in cumulative nitrogen leaching maximums (modelled nitrogen leaching from agricultural land) will not result in any increase of nitrogen dissolved in the rivers, and no increase in the adverse effects on waterways.
- Re-calibration of Table 14.2 may result in a slightly lower on farm reduction than when modelled for the original Table 14.2 (35% versus 38%) but the consequential reduction in the river was slightly higher (17% versus 16%); as shown through a desktop assessment to model the potential environmental outcome as a result of the proposal to change Table 14.2. [16] In practice, however, it is highly likely that the modelled differences are not significant due to the potential error margins in the model.

The One Plan does not presently have any mechanism for taking account of the effect of new versions of Overseer. The only currently available method to re-calibrate Table 14.2 is via plan change.

4.3. Policy Framework

Under section 104 of the RMA, when determining an application for resource consent the decision maker must, 'subject to Part 2', have regard to the effects of the activity on the environment, and any relevant provisions of a national policy statement, regional policy statement, or regional plan (among other matters). While in earlier case law the 'subject to Part 2' wording was seen as enabling a merits-based 'overall judgment' of a proposal against the purpose and principles of the RMA, more recent case law has shifted the focus back to the

[14] Carran, A, Clothier, B, MacKay, A and Parfitt, R, 2007: Appendix 6 – Defining nutrient nitrogen) loss limits within a water management zone on the basis of the natural capital of soil. An appendix to the Farm Strategies for Contaminant Management report by SLURI, the Sustainable Land Use Research Initiative, for Horizons Regional Council, June 2007.
[15] Hanly, J, and Horne, D, 2018: *Sensitivity of values in Table 14.2 of the One Plan to a change in the version of Overseer Parts A-C.* Fertiliser and Lime Research Centre, Massey University, July 2018.
[16] Patterson, M, et al, 2018: Assessment *of the Environmental Outcomes from Proposed Plan Change 2 – Table 14.2 Update.* Internal Memorandum, Horizons Regional Council, July 2018.

relevant policy provisions. In particular, the Court of Appeal recently found in *R J Davidson Family Trust v Marlborough District Council*[17] that:

- Where planning documents have been prepared in line with Part 2 of the RMA and contain 'a coherent set of policies designed to achieve clear environmental outcomes', then the proper approach in having regard to those policies under section 104(1) should be to 'implement' them in evaluating resource consent applications.[18]
- In some such cases the consent authority may 'feel assured' that there is no need to refer back to Part 2 of the RMA in making its decision.[19] However, even if Part 2 is referred to it 'could not justify an outcome contrary to the thrust of the policies.[20]

With respect to applications for intensive farming land use that do not comply with Table 14.2, both Policies 5-8 and 14-2 are very directive in terms of what they require (and under *Davidson* would need to be applied accordingly):

- Policy 5-8(a)(ii) (RPS) provides that existing intensive farming land use activities must be regulated (in targeted Water Management Sub-zones) "to achieve the nitrogen maximums" specified in Policy 5-8(a) and contained in Table 14.2.
- Policy 14-5(d) provides that existing intensive farming land use activities (in targeted Water Management Sub-zones) 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". Only very limited exceptions are specified in Policy 14-6, and there is otherwise no guidance in the policies as to the circumstances in which resource consent should be granted.

Even if the decision maker attempted to revert to Part 2 (in accordance with the accepted caveats[21]), in light of *Davidson* this could not be used to justify an outcome that is contrary to the thrust of the policies. In other words any decision to grant resource consent to an activity that did not comply with Table 14.2 may (depending on the circumstances) be inconsistent with the relevant case law and vulnerable to being overturned on appeal.

Consistent with this, the MfE Independent Advice concluded that in most circumstances the existing policy provisions did not provide a viable consenting pathway for applications that do not meet Table 14.2.

4.4. Intensive farming land use provisions in practice

It is estimated that there are 118 existing dairy farming activities requiring resource consent in targeted Water Management Sub-zones. Most of these are in the upper Manawatū River Water Management Sub-zones, with the rest in the Mangatainoka River and Rangitikei River targeted Water Management Sub-zones.

It is also understood there may be approximately 60 commercial vegetable growing operations in the Horowhenua targeted Water Management Sub-zones, although some of these are likely to fall under the 4 hectare threshold and therefore outside the definition of intensive farming

[17] *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316 ('Davidson').
[18] Davidson, at [74].
[19] Davidson, at [75].
[20] Davidson, at [74].
[21] Davidson, at [76].

land use activities. There are five known intensive sheep and beef land uses and an unknown number of existing cropping land uses requiring a resource consent under the provisions.

Target Catchment	Water Management Zone	Unconsented
Rangitīkei River (Coastal)	Rang_4	20
Mangatainoka River	Mana_8	11
Upper Manawatū above Hopelands	Mana_1 – Mana_5	70
Manawatū above Gorge	Mana_6 and Mana_9	17
Total		**118**

Analysis of 70 Overseer input files[22] for the upper Manawatū River Water Management Sub-zones shows one out of 70 dairy farms (1%) could achieve the current Table 14.2 year 20 cumulative nitrogen leaching maximums. A further 6 dairy farms (8%) could achieve either the 5 or ten-year cumulative nitrogen leaching maximums. It is understood from the industry that existing commercial vegetable growing operations in the Horowhenua targeted Water Management Sub-zones will not achieve the current Table 14.2 cumulative nitrogen leaching maximums. However, there are not many, if any, Overseer base files for these operations, as previously the horticulture industry has considered that Overseer is not the best tool available to model nitrogen losses. This is largely because Overseer does not model leaching from some vegetable crops and does not model small cropping areas (less than one hectare) or multiple crops grown in the same area over an annual cycle very accurately.

4.4. Economic effect of status quo

In order to illustrate some of the challenges with the operative plan provisions (the status quo), dairy farming and vegetable growing have been considered by way of example.

Dairy Farming

The current intensive farming land use provisions have unintended negative economic consequences which affect dairying, commercial vegetable growing, cropping and intensive sheep and beef. The most significant impact of the current provisions are for existing unconsented activities in targeted Water Management Sub-zones. Most of these are located in the north west of Tararua district and the southern Horowhenua district.

Economic modelling[23] predicts that the majority of the unconsented farms in the Upper Manawatū would be unlikely to remain economically viable to achieve current Table 14.2 cumulative nitrogen leaching maximums.

In conducting a cluster analysis of Overseer files from 126 farms within this area of the Manawatū River catchment, it was found that 92 of these farms could be classified as self-contained or low intensity farm systems. These farms are low input farms that would struggle to maintain profitability, to service existing debt, or to retain investment, severely curtailing their capacity to invest in the mitigations crucial to comply with Table 14.2 cumulative nitrogen leaching maximums. This would have a negative impact on the rural economy and

[22] Horizons analysis of anonymous Overseer files provided for 2012-2013.
[23] Parminter, T, 2018: *A comparison of changes to nitrogen loss allowances on dairying in the Upper Manawatū river catchment*. Kapag Ltd, May 2018.

employment. Although a number of farms could make the changes to meet the cumulative nitrogen leaching maximums, some of those farms would not have enough nitrogen to sustain profitable production levels beyond the short term.

The current Table 14.2 cumulative nitrogen leaching maximums therefore have negative implications for the profitability, sustainability and viability of a significant proportion of farms in the Upper Manawatū.

Similar results were seen in a report on farm scale economic effects by Ridler, 2017.[24] This study (of five case study dairy farms in the Region) illustrated that it was possible for dairy farmers to make significant reductions in N leaching at little or no economic cost compared to doing nothing, although beyond certain levels a 'tipping point' emerged where further N reductions made the farm financially unviable.

In a subsequent analysis[25] of three synthetic farms Ridler reported that all three farms presented could not viably reach the required nitrogen leaching reduction limits set by the 20-year period in Table 14.2. However, Ridler also reported that considerable reductions could be achieved rapidly and at little cost in the initial phase of nitrogen leaching reduction. In undertaking this analysis, Ridler noted that these farms were high leaching and expressed concerns about the concept of using synthetic rather than real farms for the analysis.

In 2018 the financial implications of achieving the current Table 14.2 nitrogen leaching maximums for four dairy farming systems were modelled under conditions typical of the Tararua District. These farming systems were: self-sustaining, low intensity, moderate intensity and high intensity/irrigated dairy farms. Two arable farm systems typical of the Coastal Lakes Rangitikei were also modelled[26].

The report concluded that all of the model farms became less profitable as a result of introducing the mitigations necessary to comply with the One Plan. The self-contained dairy farm and the low intensity dairy farm did not have enough profit to remain viable at typical industry levels of debt. Reduced profitability would become evident and would likely result in a downward pressure on the future property values for these farms.

These results can be compared with analysis of five dairy farm systems identified from cluster analysis of Overseer files for the Upper Manawatū targeted Water Management Sub-zones. The Upper Manawatūhas the both the most dairy farms requiring resource consents and the most complete set of Overseer files.

This modelling estimated that representative farm system types comprising about 65% of dairy farms in the Upper Manawatū Targeted Water Management Sub-zones would not be financially viable after management practices had been introduced to enable them to operate within the current cumulative nitrogen leaching maximums in Table 14.2. Of the remainder, many would only be able to operate within the cumulative nitrogen leaching maximums by depleting their soil nitrogen reserves, which is not sustainable over time.

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[24] Ridler, B, 2016: *The feasibility of nutrient leaching reductions (N leaching) within the constraints of minimum impact on the profitability and production of five dairy farms in Horizons Region*, A Report for Horizons Regional Council, June 2016.

[25] *Ridler, B, 2017: The feasibility of nutrient leaching reductions (N leaching) within the constraints of minimum impact on the profitability and production of three dairy farms in Horizons Region, A Report for Horizons Regional Council, December 2018.*

[26] Parminter, T, 2018: *An impact assessment of One Plan policies and rules on farming systems in the Tararua District and the Manawatū-Wanganui Region*. KapAg, January 2018.

However, in the event that Table 14.2 and the nutrient leaching outputs are re-calibrated using the latest version of Overseer, all representative farm systems have been modelled to remain financially viable, although some may struggle to service high levels of debt or continue to run down nitrogen reserves in order to operate within Table 14.2 parameters.

Commercial vegetable growing

An assessment of the economic impact of mitigations to reduce nitrogen losses from three types of grower rotations including cash cropping, intensive vegetable production and market gardening has been undertaken.[27] The report (by Ford) concluded that:

- *The most effective means of mitigation that is possible to ensure that a vegetable grower can continue to grow vegetables whilst meeting the requirements of the existing planning regime would be to buy additional land that they could farm less intensively which would balance the whole farm N leaching result to meet the 30 kg N/ha limit.*
- *In order to meet the requirements of Table 14.2 Rotations 2 Intensive Vegetable and 3 Market Garden experience a significant deterioration in their ROI. While the results for both remain technically viable from a Nett Cash Position perspective the Return on Investment which they receive is unsatisfactory. Therefore I believe that the vegetable growers in the Horizons area would find it more attractive to move their operations to an area where they were not required to meet such targets than to go to the additional cost of the mitigations modelled here.*
- *This will mean that by far the majority of vegetable growers will be required to apply for a restricted discretionary consent outside Table 14.2. The costs to do this will be considerable and the outcomes of their application are uncertain.*

In comparison to commercial vegetable growing, Mr Ford found that there was little change in the financial performance of the cash cropping system used in his modelling because a secondary land use and a small part of a larger less intensively used area in the model.

Macroeconomic Impact Assessment – Dairy and Commercial Vegetable Growers

Macro-economic modelling[28] predicts that economic effects including wage decreases and declining demand for labour are not just felt within the dairy, horticulture and cropping industries, but carry through to the wider economy, including supplying industries such as transport and logistics, through to local retail and more distant markets and exports.

The report authors also predict that following an initial contraction of the dairy and horticulture industries, resources, including labour, capital and land, would eventually be adapted to exploit new opportunities. The time for this adaptation to occur is unknown, however, and would depend on the ability for affected workers to reskill, as much as for businesses to recalibrate into competitive industries and enterprises.

Similarly, macroeconomic impacts of the proposal on GDP, labour and wages in the Rangitikei are approximately half of the magnitude of the impact of meeting the current Table 14.2.

[27] Ford, S, 2017: *Farm scale economic impact analysis of One Plan intensive land use provisions.* The Agribusiness Group, October 2017.
[28] NZIER. 2018 *The macroeconomic impacts of the One Plan's intensive land use provisions.* July 2018.

An evaluation of the regional macroeconomic impacts of farmer and commercial vegetable growers of meeting the nitrogen loss targets in Table 14.2 has been undertaken. The modelling was done using a Computable General Equilibrium model and focussed on three local economies: commercial vegetable growing in the Horowhenua district, and dairy farming in the Tararua and Rangitīkei districts.

The results of the modelling predict that compliance with the current Table 14.2 cumulative nitrogen leaching maximums would have negative effects on local, regional and national economies, as well as flow on effects to peripheral industries, such as retail, agricultural supplies, transportation and logistics, which are also impacted by the primary sector slowdown.

In particular:

- Additional costs from meeting nitrogen loss targets lead to lower agricultural production, which leads to lower regional GDP and household spending.
- Industries closely related also suffer from the slowdown of the dairy and horticulture industries; and
- Competing industries may gain from the decrease of the dairy and horticulture industries.

4.5. Social Impacts

Current shortcomings in intensive farming land use provisions have unintended negative social consequences. The social impacts associated with the need for compliance with the cumulative nitrogen leaching maximums in Table 14.2 were assessed with respect to resource users in targeted Water Management Sub-zones, goods and service providers and communities, particularly Pahiatua, Dannevirke, Horowhenua and Marton.[29]

It was found that the magnitude of social impacts associated with Table 14.2 cumulative nitrogen leaching maximums extends beyond resource users through to wider communities. Specifically, many of the participants in the SIA described the current policy framework in terms of vulnerability (being “in-limbo”, unable to make choices); uncertainty (loss of control, risk, inability to make long term decisions); anxiety (long term state of stress, fear of forced exit); and stigma (seen as ‘environmentally unfriendly” and “illegal”).

Some farmers and growers want to expand and grow their operations and employ more staff, and others want to invest in new technology and facilities, however, many are reluctant to make future investment without policy certainty. Many dairy farmers are aware that they would need to make significant changes to their farm systems in order to meet the Table 14.2 CNLM, but doubt that the investment would be sustainable, particularly given an economic climate whereby it has been perceived by some interviewees that banks are currently reluctant to lend on unconsented ventures.

Identified impacts would include loss of jobs, reduced wages and income. Financial instability is likely as unemployment increases in rural and provincial locations as a result of farms exiting from the industry. Farmers looking to transition into retirement are facing uncertainty as they are not in a position to make new investment in order to ensure the farm can gain consent.

[29] Collins, Heather. 2018: *Social Impact Assessment Proposed Plan Change 2.* Report for Horizons Regional Council, 2018

Personal and property rights are often impacted in response to policy interventions. What is important is achieving a balance in terms of curtailment of rights and choices with wider environmental and social benefits.

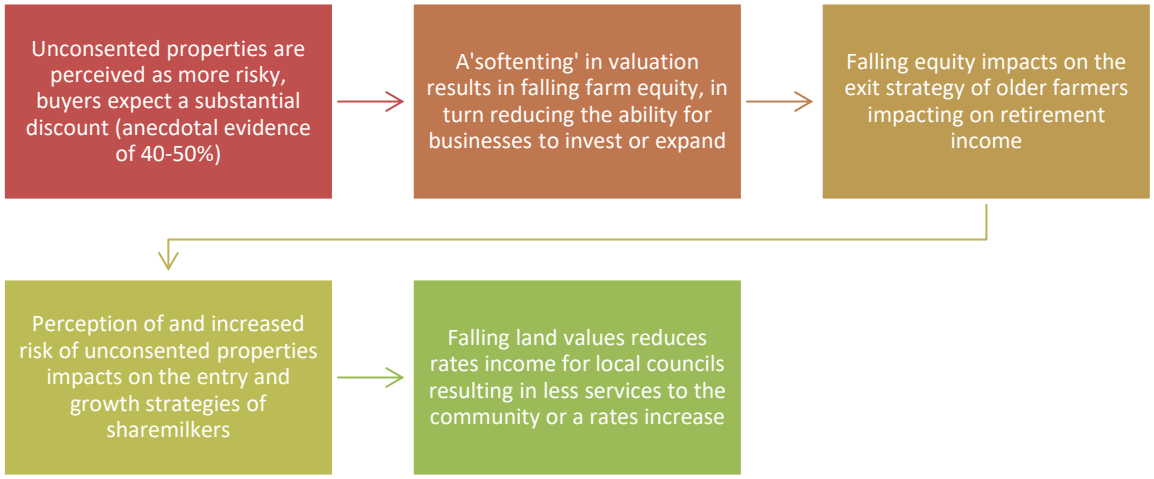

Figure 3. ***Perceptions of SIA participants captured as flow-on socio-economic effects***

In contrast with the above perceptions from participants in the Tararua District, grower industry members believe that land values may not decrease because of the significant and increasing demand for subdivision and housing. However, there is pressure on the Horowhenua District Council to rezone land to enable land use change to occur. This would offset the loss of value if land under horticulture could not be used productively.

Social and economic disruption manifests in different ways, undermining relationships that bind communities and degrading cohesion and connectedness. The nutrient management provisions do not apply to sheep and beef farmers (unless they qualify as 'intensive sheep and beef', i.e. are larger than 4 ha and include irrigation) and there is a sense of inequity stemming from this in addition to the fact that many dairy farmers have obtained consent, while others haven't. Moreover, the natural capital approach enables farms on higher class soils to leach more than those located on lower class soils.

The impacts of the decline of farm businesses would include unemployment, loss of families from the community, reduced school rolls in rural areas, and falling rates of enfranchisement in community networks and institutions. In the words of one participant - *"The loss of community will be far quicker than the loss of farms."* There may be flow-on effects to local retailers and service providers as affected families and businesses struggle in this economic climate. The departure of unconsented farming families from towns and districts and falling land values of abandoned dairy farms would potentially erode the ratepayer base to support and fund community services.

4.6. Enforcement of Plan

Existing Intensive farming land users who require resource consent under the One Plan provisions, but do not have one are operating in contravention of the One Plan. Horizons could take enforcement action to require compliance. Enforcement is considered an appropriate course of action in circumstances where an intensive farming land user can achieve Table 14.2 cumulative leaching maximums. However, it is very difficult to undertake enforcement action against farmers who cannot achieve Table 14.2 cumulative nitrogen leaching maximums when they have no pathway to apply for a resource consent. The difficulty with

regulation and enforcement raises issues with the integrity of the One Plan, with costs associated with the operative provisions not working in an effective manner.

4.7 Summary

The operative provisions are no longer considered fit for purpose (or are no longer considered to implement the overarching policy intent) as a result of two external factors:

- Ongoing changes in the Overseer model mean that farm systems that could have met the Table 14.2 maximums when modelled using Overseer version 5.2.6 (the version used to originally prepare the Table), no longer do so when modelled in Overseer version 6.3.1 (the current version), even if nothing in real terms has changed in terms of farm practice. Effectively this means that very few farms could now comply with the limits in Table 14.2. As a result, Table 14-2 now fails to 'give effect to' the policy direction in the RPS that nitrogen leaching maximums set in the Regional Plan must be 'achievable on most farms using good management practices'.

- In addition, applications for activities that do not meet the Table must now be considered in light of significant new RMA case law that has been determined since the One Plan became operative. These cases require the provisions to be applied in a way that may not have been anticipated when the One Plan was prepared, and in essence mean that directive policies in relation to 'achieving' (Policy 5-8) or 'not exceeding' (Policy 14-5) the limits in Table 14.2 now make it very difficult for resource consent to be granted in circumstances where the limits are not met. While in preparing the One Plan it was anticipated that resource consent could be granted for existing activities above the Table in some circumstances, it is now considered that the policy provisions do not provide a viable pathway for resource consent applications to follow.

One Plan Intent	Current Issue
Nitrogen leaching maximums will be achievable on most farms using good farm management practices.	Changes to the Overseer model outputs without concurrent re-calibration of Table 14.2 have resulted in most farms **not** achieving cumulative nitrogen leaching maximums using good farm management practices. Accordingly Table 14-2 no longer gives effect to this aspect of Policy 5-8 of the Regional Policy Statement.
Rules provide a pathway for consent applications for intensive farming land use activities that do not meet the cumulative nitrogen leaching maximums.	Legal and planning evaluation has found that there is no pathway for consent applications for **existing** intensive farming land uses in targeted Water Management Sub-zones where they do not achieve cumulative nitrogen leaching maximums because of shortcomings in the policy provisions.

In practical terms these factors in combination mean that very few existing intensive farming activities can meet Table 14.2, and it is almost impossible for those that do not to secure resource consent for their activities, even if the land use has not substantially changed since the One Plan became operative. These issues with implementation of the rule and policy framework, along with the implications for improvement of surface water and groundwater quality contemplated by Chapter 5 (RPS), are the key drivers for Plan Change 2.

5. Approach to Evaluation

Section 32 of the RMA requires that the proposed plan change be evaluated in the following manner:

- Assess the extent to which each objective is the most appropriate way to achieve the purpose of the RMA.[30] For the purpose of this report, and in accordance with section 32(6) of the RMA "objectives" means (in the absence of new or amended objectives) the "purpose of the proposal".
- Assess whether the provisions of Plan Change 2 are 'most appropriate' to achieve the objective of the plan change, as well as the relevant objectives in Chapter 5 (for the RPS amendments) and Chapter 14 (for the regional plan amendments).[31] In looking at the appropriateness of the objectives, this report has had regard to the resource management issues Plan Change 2 seeks to address, and the extent to which the status quo does or does not achieve the purpose of the RMA. This assessment in turn is comprised of a number of steps or considerations:
    - Consider alternative options for achieving the objectives;[32]
    - Assess the efficiency and effectiveness of the policies, rules and other methods contained in the proposed plan change at achieving the objectives[33] (having regard to the different kinds of costs and benefits that are anticipated[34]).
    - Assess the risk of taking or not taking action if there is uncertain or insufficient information about the identified issues;[35] and
    - Summarise the reasons for deciding on the provisions.[36]
- The section 32 evaluation is required to contain a level of detail that corresponds to the scale of significance of the effects anticipated from implementing the proposed plan change.

Section 32(2) requires the benefits and costs of implementing provisions to be assessed in terms of the environmental, economic, social and cultural effects that are anticipated from the implementation of the provisions, including opportunities for economic growth and employment. If practical, these benefits and costs should be quantified.

In this report, 'most appropriate' has been interpreted to mean 'suitable, but not necessarily superior'.[37] This means that the most appropriate option does not need to be the most optimal or best option but must demonstrate that it will meet the objectives in an efficient and effective way.

[30] Section 32(1)(a) RMA.
[31] Section 32(1)(b) RMA. Section 32(3) clarifies that this evaluation must relate to both the 'objectives' of the amending proposal (and under section 32(6) in this context the objective is the purpose of Plan Change 2), and the relevant existing objectives in the One Plan.
[32] Section 32(1)(b)(i).
[33] Section 32(1)(b)(ii).
[34] Section 32(2) RMA.
[35] Section 32(2)(c) RMA.
[36] Section 32(1)(b)(iii) RMA.
[37] *Rational Transport Soc Inc v New Zealand Transport Agency* HC Wellington CIV-2011-485-2259, 15 December 2011.

6. Objectives of Plan Change 2[38]

Plan Change 2 does not change or introduce new objective(s) to the Regional Policy Statement or Regional Plan. It relies on the objectives of the operative Regional Policy Statement and Regional Plan. As noted earlier in this report. the "objective' of Plan Change 2 is therefore the purpose of the proposed plan change (or the proposal).

The purpose (or 'objective') of Proposed Plan Change 2 is:

> *To improve the workability of the intensive farming land use provisions 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.*

Water quality objectives in the One Plan related to this plan change are Objectives 5-1, 5-2 and 2-1 (in relation to water quality), and Objective 14-1 (in relation to intensive farming land use). These existing objectives were thoroughly tested during the One Plan hearing process and were considered to be the most appropriate way to achieve the purpose of the RMA.

As noted above, the water quality objectives are also considered to be consistent with the higher-level objectives of NPSFM, and do not preclude future plan changes to fully implement NPSFM in a staged manner through to 2025.

Given there are changes proposed to both the RPS and Regional Plan, Plan Change 2 must be considered in terms of whether the amendments are 'most appropriate' to achieve the objective of the plan change, as well as the relevant objectives in Chapter 5 (for the RPS amendments) and Chapter 14 (for the regional plan amendments

6.1. Evaluation of Objectives of the Plan Change

The 'objective' of Plan Change 2 is considered the most appropriate way to achieve the purpose of the RMA, in relation to the current issues identified above. Managing diffuse discharges associated with intensive farming land use is crucial when considering the key cornerstone issues under the One Plan. By ensuring that the RPS, and in turn Chapter 14, contains a workable framework to provide oversight, management and regulation of these activities, the water quality outcome sought by the One Plan, and the RMA, will be better achieved. The 'purpose' of Plan Change 2 will see better:

- Sustaining the potential of the waterways in the Region to meet the reasonably foreseeable needs of future generations (s 5(2)(a));
- Safeguarding the life supporting capacity of the waters of rivers, streams and Lakes (s 5(2)(b));
- Remedying and mitigating adverse effects from surrounding land use (s 5(2)(c)).

As noted above in section 1.2 of this report, timeliness is particularly relevant for Plan Change 2, given the unsatisfactory nature of the current situation (i.e. a large portion of intensive farming in the region is unconsented and unregulated). It is considered that a solution which did not address this situation as soon as reasonably practicable would not be 'most appropriate' to achieve the purpose of the RMA.

[38] Intended to fulfil the requirements of [RMA s32 (1)(a)].

Overall it is considered that the Plan Change 2 objective set out above is ‘most appropriate’ to achieve the purpose of the RMA (in terms of s 32(1)(a) of the Act).

In the following sections the options and identified package of provisions are evaluated against this objective of the Plan Change as well as the applicable objectives in the One Plan itself.

7. Reasonably Practicable Options[39]

The analysis identifies and evaluates the most appropriate options to achieve the objective (the purpose) of Plan Change 2.

The approach taken is to:

- identify all reasonably practicable options;
- undertake a high-level screening of those options; and
- undertake a full assessment of the proposal (including efficiency and effectiveness) most likely to achieve the purpose of the purpose of the plan change compared to the status quo.

After considering the scope of the plan change, the options identified and considered in preparing Plan Change 2 are:

A. No immediate plan change, in favour of waiting for the outcomes of the Horizons' catchment review process (branded as *Our Freshwater Future*);
B. Delete Table 14.2 and replace it with a new regime for allocating nitrogen losses from intensive farming land use activities;
C. Recalibrate Table 14.2 CNLM with the most up-to-date version of Overseer;
D. Introduce a new policy mechanism to allow decision-makers to take account of the effects of future updates of Overseer versions on cumulative nitrogen leaching maximums in Table 14.2;
E. Introduce cumulative nitrogen leaching maximums tailored to each targeted Water Management Sub-zone;
F. Introduce amendments that provide a viable policy/rule framework for existing intensive farming land use activities that cannot achieve Table 14.2 cumulative nitrogen leaching maximums;
G. Introduce new Regional Plan policy provisions that provide a pathway where an intensive farming land user wishes to move to a non-intensive farming land use and needs time to transition.

These options are evaluated below.

[39] Intended to fulfil the requirements of [RMA s32 (1)(b)(i)].

Proposed option		Explanation	Appropriate to achieve plan change purpose?			Appropriate to achieve relevant One Plan (RPS or Plan) freshwater objectives?	Overa Assess
			1. Resolve Overseer Update inequity	2. Provide consent application pathway	3. Achieve as soon as practicable		
A	No immediate plan change, in favour of waiting for the outcomes of the Horizons' catchment review process (branded as *Our Freshwater Future*)	The status quo is retained, with future changes to these provisions to come (at the earliest) once the outcomes of the *Our Freshwater Futures* programme are known and subsequent plan change processes are completed. Any plan change under this option would begin no earlier than 2023. In the meantime, the issues with the current provisions will continue. As well as that, there will be growing pressure on Horizons for the need to enforce the operative plan provisions before a new planning framework is in place. That would have significant additional social and economic costs.	**Yes - eventually**	**Yes - eventually**	**No**	**Yes - eventually**	**Inappro**
B	Delete Table 14.2 and replace it with a new regime for allocating nitrogen losses from intensive farming land use activities;	Deletion of Table 14.2 is a significant departure from the nitrogen allocation framework in the operative One Plan. An alternative allocation methodology would need to be implemented. This would require a complete overhaul of the current natural capital based framework for allocation of nitrogen and new provisions developed using the new allocation framework. There is no commonly accepted alternative approach to allocation of nitrogen leaching currently available. Several regional councils have grappled or are grappling with this issue. Identification and evaluation of alternative nitrogen allocation will be considered during the *Our Freshwater Futures* programme and therefore have the same plan change timeframe as Option A. In the meantime, the issues with the current provisions will continue.	**Yes - eventually**	**Yes - eventually**	**No**	**Yes – eventually?**	**Inappro**

C	Recalibrate Table 14.2 CNLM with the most up-to-date version of Overseer;	This will resolve the current problem created by Overseer model updates, by recalibrating the cumulative nitrogen leaching maximums with the most up-to-date version (6.3.1). Implementation of the intensive farming land use provisions via the Controlled Activity pathway will resume. It is estimated that 57% of dairy farms will be able to achieve the recalibrated Table 14.2 cumulative nitrogen leaching maximums using good management practice after implementation of this option. It is however understood that no commercial vegetable growing operations will currently be able to comply using good management practice alone. The update to the table is not expected to give rise to any increase in nitrogen leaching, as it is essentially just a 'recalibration' or adjustment to address 'inflation' in the model results. Water quality improvements will be made (relative to the status quo) as a result of the steps that will need to be taken to comply with the updated table. The adverse social and economic impacts associated with the status quo will be addressed by enabling existing intensive farming land users to obtain resource consents. This option on its own does not address all the plan change objectives (i.e. will not address the issue with the consenting pathway) but will be effective if bundled with some other options. It does not address the potential impact of future updates to Overseer on implementation where a version change has an impact on predicted cumulative nitrogen leaching maximums.	**Yes**	**No**	**Yes**	**Yes**	**Appropri par**
D	Introduce a new policy mechanism to allow decision-makers to have regard to the effects of future updates of Overseer versions on achievement of Table 14.2 cumulative	Responding to the impact of Overseer updates is a real challenge. The only way to recalibrate Table 14.2 is using the RMA plan change process. To resolve this issue, including rethinking the use of Table 14.2, further work needs to be done and is beyond this plan change. In the meantime, this option will provide some discretion for applicants and decision makers to look at the reason why Table 14.2 may be exceeded and whether it is solely due to an update of Overseer. This is intended to	**Yes**	**No**	**Yes**	**N/A**	**Appropri par**

	nitrogen leaching maximums	avoid the current issue where Overseer updates have resulted in inflated on-farm nitrogen leaching values without a concurrent recalibration of Table 14.2. The provisions include a new policy to allow decision-makers to take account of the impact of Overseer updates when considering a discretionary activity resource consent application. It also includes a new method to provide for checks after each Overseer update and consideration by Horizons whether any variance is significant enough for it to initiate a plan change to recalibrate Table 14.2. These measures will future proof the provisions as far as possible within the current RMA framework (i.e. it is not possible to more directly link the activity status to Overseer version changes as this would likely give rise to an unlawful 'incorporation by reference' issue). Accordingly this will avoid (or at least reduce the impacts of) a repeat of the current difficulties associated with Overseer version changes. Implementation will enhance the effectiveness of Option C.					
E	Introduce cumulative nitrogen leaching maximums tailored to each targeted Water Management Sub-zone	This option would introduce cumulative nitrogen leaching maximums calculated based on specific input data for each Water Management Sub-zone. Early advice is that the effect on the cumulative nitrogen leaching maximums would be variable. Cumulative nitrogen leaching maximums in some Water Management Sub-zones may increase relative to Table 14.2 and others decrease. The effectiveness of this option is not known and would require further research. The timeframe to develop a tailored approach is likely to be similar to the *Our Freshwater Futures* programme and therefore have the same plan change timeframe as Option A. In the meantime, no further progress on water quality improvements would be achieved nor any mitigation of unintended adverse social and economic impacts.	**Maybe – needs researching**	**No**	**No**	**Maybe – needs researching**	**Inappropri**

F	Introduce amendments that provide a viable policy/rule framework for existing intensive farming land use activities that cannot achieve Table 14.2 cumulative nitrogen leaching maximums.	This option will provide a viable pathway for consent applications where intensive farming land use activities cannot achieve cumulative nitrogen leaching limits. Each application will be assessed on its own merits. Under this option the provisions include: • Introduction of a new rule to provide a viable pathway for consent applications for intensive farming land use activities that cannot achieve Table 14.2 cumulative nitrogen leaching maximums; and • Amendments to the intensive farming land use activity policies to ensure there is clear guidance for applicants and planners evaluating consent applications. These provisions will provide a viable pathway for intensive farming land users to lodge consent applications that doesn't exist presently. Among other things they will focus on whether proposed measures to reduce nitrogen over time constitute the 'best practicable option', and direct attention to the strategies for water quality in Chapter 5 of the One Plan. Enabling consents to be granted (or declined, such that the legal position is confirmed and land use change occurs) will lead to water quality improvements and mitigation of the adverse social and economic impacts will be achieved relative to the status quo. This option on its own does not address all the plan change objectives but will be effective if bundled with some other options.	**No**	**Yes**	**Yes**	**Yes**	**Appropri par**
G	Introduce a new Regional Plan policy provision that provide a pathway where an intensive farming land user wishes to move to an alternate land use and needs time to make that transition (Option G).	It is also anticipated that some farmers may decide to transition from an intensive farming land use to an alternative land use. Opportunities for land use change, innovation, diversification, and new directions in rural business are currently being explored by a number of agencies. The intent of this option is to provide appropriate lead in time for this to occur. Under this option the provisions include: • Introduction of new policy provisions to provide guidance for applicants and consent planners on the requirements for assessing applications as transitional; and	**No**	**Yes**	**Yes**	**Yes**	**Appropri par**

		• Introduction of a new method in the RPS relating to supporting investigation of new opportunities in the rural sector. It is intended that intensive farming land users seeking consent for land use transition will undertake appropriate good management practice and there will be no intensification of the activity (including nutrient loss) during the term of any consent granted. Water quality improvements will be made relative to existing activities, as a result of mitigations that can be carried out in transition that are consistent with any alternative land use pursued, and also as a result of the transition to lower intensity activities at the end of the consent period. In addition, there will be some mitigation of negative social impacts for intensive farming land users who are able to obtain consent through this option. Implementation will enhance the effectiveness of Option F as it provides an additional, less onerous pathway for those that exceed Table 14-2 to exit the intensive farming land use activity.					

8. Evaluation of Preferred Options for Provisions

The evaluation of reasonably practicable options suggests that the objective (purpose) of Plan Change 2, alongside the objectives of the RPS (Chapter 5) and Chapter 14, will be achieved by bundling Options C, D, F, & G into an option for assessment as part of the plan change. These options are considered most likely to resolve the issues which arise in implementation of the rule and policy framework for existing intensive land use activities. Accordingly this bundle was taken forward for further evaluation under section 32 in order to assess whether it is 'most appropriate' to achieve the relevant objectives.

The bundle of options proposed includes:

- Recalibrate Table 14.2 CNLM with the most up-to-date version of Overseer (Option C);
- Introduce a new policy mechanism to allow decision-makers to have regard to the effects of future updates of Overseer versions on achievement of Table 14.2 cumulative nitrogen leaching maximums (Option D);
- Introduce amendments that provide a viable policy/rule framework for existing intensive farming land use activities that cannot achieve Table 14.2 cumulative nitrogen leaching maximums (Option F); and
- Introduce new Regional Plan policy provisions that provide a pathway where an intensive farming land user wishes to move to a non-intensive farming land use and needs time to transition (Option G).

8.1. Evaluation of Bundle of Options and Provisions[40]

The alternative to the bundle of options is no plan change (status quo). This is because the alternative options require a fundamental change in the framework for managing intensive farming land use activities and mean that the issues as a result of the status quo continue until an alternative framework is developed. The bundle of options and provisions are therefore evaluated against maintaining the status quo.

In preparing this evaluation the following matters have been considered:

- The environmental, economic, social and cultural costs and benefits of the options;
- The effectiveness of the options at addressing the issue, and achieve the purpose of the plan change and RMA;
- The efficiency of the options at addressing the issue at the lowest cost and highest net benefit to all members of society;
- Opportunities for economic growth and employment;
- Overall appropriateness of the options; and

[40] Intended to fulfil the requirements of [RMA s32 (1)(b)(ii)].

- The risk of acting or not acting if there is uncertain or insufficient information

The detailed plan change provisions for the bundle of options approach are set out in Appendix A.

Status Quo Provisions	Bundle of Options Provisions
This option involves retaining the existing regulatory framework contained in the operative Regional Policy Statement and Regional Plan. All existing intensive farming land use activities in targeted Water Management Sub-zones and new intensive farming land use activities in the Manawatū-Whanganui Region have been regulated since the One Plan was introduced. Intensive farming land users that require a consent and do not have one are operating unlawfully. To date Horizons has not considered it appropriate to take enforcement action in relation to existing operations, given very few farms would be able to meet the operative Table 14.2 and it is acknowledged that there is currently no viable consenting pathway available for those for intensive farming land users that cannot achieve Table 14.2. However, the uncertainty around enforcement raise ongoing issues for Horizons in light of the Council's general obligation to enforce its plan.	The bundle of options proposal is: • Recalibrate Table 14.2 CNLM with the most up-to-date version of Overseer; • Introduce a new policy mechanism to allow decision-makers to have regard to the effects of future updates of Overseer versions on achievement of Table 14.2 cumulative nitrogen leaching maximums; • Introduce amendments that provide a viable policy/rule framework for existing intensive farming land use activities that cannot achieve Table 14.2 cumulative nitrogen leaching maximums. Such activities would be considered under a new discretionary activity rule, with policy guidance that applicant must propose additional measures to reduce nutrient leaching and run-off, beyond normal 'Good Management Practice'; and • Introduce new Regional Plan policy provisions that provide a pathway where an intensive farming land user wishes to move to a non-intensive farming land use and needs time to transition. These activities would also require discretionary activity consent, with consent duration limited to five years.

Benefits	
Environmental[41] benefits	
Existing intensive farming activities that require a resource consent and can achieve the current Table 14.2 cumulative nitrogen leaching maximums have made or can make consent applications now. In these few cases, there are environmental benefits from consent conditions requiring control of nutrients, pathogens and sediment. Some intensive farming land users may take proactive action to control contaminants while current issues with the provisions are dealt with. Research may result in new mitigations and good practice that may allow more existing intensive farming land users to achieve the operative Table 14.2 cumulative nitrogen leaching maximums and comply with the Controlled Activity rule. More work could be undertaken in advance of any plan change, e.g., improved science and nutrient modelling, including the Overseer model, although this will not be available for several years and will occur as part of the Our Freshwater Futures programme. In a narrow sense, further 'environmental' benefits (i.e. reductions in nitrogen leaching) would result if Horizons were to enforce the operative regulatory framework, but that would likely come at significant social and economic cost (i.e. many existing operations would simply have to cease due to difficulties in obtaining resource consent).	The environmental outcomes of the proposed provisions are superior to the status quo (assuming the operative provisions are not strictly enforced) because more existing intensive farming land users that require a resource consent will be get one. It is estimated[42] that about 57% of existing dairy farmers requiring resource consents in the upper Manawatū targeted Water Management Sub-zones will achieve Controlled Activity status under a recalibrated Table 14.2 cumulative nitrogen leaching maximums using good management practice[43]. Enabling these operators to obtain resource consent will also mean they have to comply with resource consent conditions regarding the management of the activities; thereby bringing about more improvements in terms of environmental outcomes. Existing intensive farming land users (including commercial vegetable growers) that cannot achieve cumulative nitrogen leaching maximums will be provided with a best practicable option-based discretionary pathway under which they can apply for consent. All land users that get a consent will need to be undertaking good management practice or best practicable option (if a discretionary activity) measures to mitigate nutrients, pathogens and sediment which will result in greater water quality improvements than if they have no consent. Finally, and as addressed above, the environmental effects of operations that comply with the recalibrated Table 14.2 will be no greater than what was anticipated from complying with the operative Table 14.2 under the earlier version of Overseer.

[41] While under the RMA the 'environment' is defined broadly to encompass social, economic, and cultural matters, this section focusses on effects on or benefits for the natural environment (under s 32(2)(a)).
[42] Horizons analysis of anonymous Overseer files provided for 2012-2013.
[43] Those that are modelled to achieve cumulative nitrogen leaching maximums until year nine in One Plan Table 14.1 or beyond.

Economic benefits	
The costs associated with the consent process and implementing mitigations to control contaminants are deferred for existing intensive farming land users that require a consent, but currently have no pathway to make an application. It is reported[44] that there is pressure on the Horowhenua District Council to rezone land to enable land use change to occur to respond to the significant and increasing demand for subdivision and housing. This would offset the loss of value if land currently under horticulture could not be used productively. Macroeconomic modelling[45] shows that competing industries may eventually benefit from a decrease of the dairy and commercial vegetable growing industries and the decline in agricultural exports is partly offset by small increases in exports across many manufacturing and services industries due to a predicted shift of resources away from the dairy and commercial vegetable growing horticulture industries into other industries of the economy.	The economic costs of the status quo are summarised below. The negative economic impacts of the current provisions on intensive farming land users will be reduced under the proposed provisions. The provisions will not eliminate all negative economic effect, in terms of the costs of regulation. It was accepted that there would be some negative economic effects when the One Plan was introduced. **Dairy Farming** On farm economic modelling predicts[46] all dairy farms requiring resource consents in the Upper Manawatū Water Management Sub-zones could remain financially viable after making mitigations to achieve Table 14.2 cumulative nitrogen leaching maximums, but: • Some farms may not be able to service high levels of debt; and • Some farms would need to run down their nitrogen reserves in order to operate within the re-calibrated cumulative nitrogen leaching maximums. The author (Parminter) also predicts that, in adapting to policy pressures, emerging trends over the long term would include: • Increased production per cow; • An increase in the size of lower output farms, e.g., through mergers to achieve greater economies of scale and maintain profitability; and • Higher intensity farms adopting mitigations such as covered feed pads and herd homes, which would enable these farms to maintain their profit level while reducing their nitrogen losses.[47] The new Discretionary Activity provided for intensive farming land users that cannot achieve Table 14.2 cumulative nitrogen leaching maximums will provide a pathway for these dairy farmers to make consent applications.

[44] Collins, Heather. 2018: *Social Impact Assessment Proposed Plan Change 2.* Report for Horizons Regional Council, 2018
[45] NZIER. 2018 *The macroeconomic impacts of the One Plan's intensive land use provisions.* July 2018.
[46] Parminter, T, 2018: *A comparison of changes to nitrogen loss allowances on dairying in the Upper Manawatū river catchment*. Kapag Ltd, May 2018.
[47] Parminter, T, 2018: *A comparison of changes to nitrogen loss allowances on dairying in the Upper Manawatū river catchment*. Kapag Ltd, May 2018.

	Commercial vegetable growing An assessment of the economic impact of mitigations to reduce nitrogen losses to achieve the recalibrated Table 14.2 to cash cropping, intensive vegetable production and market gardening was undertaken.[48] The author (Ford) concluded that these activities would experience a significant loss of income and would potentially find it more attractive to move their operations to an alternative location with a consequential adverse effect on the local economy. These activities would have a viable best practicable option pathway to apply for a discretionary consent under the proposed provisions and it is expected that negative economic effects will be mitigated. The proposed provisions are intended to respond to the reported negative economic impact of the status quo on unconsented commercial vegetable growing businesses and on the district. It should also mitigate broader concerns about the potential impact of a loss of vegetable growing businesses on New Zealand's food security and New Zealander's expectations of fresh healthy locally grown produce. **Macroeconomic benefits** Macroeconomic modelling predicts that the negative effects of the proposed conditions will be much less than the status quo. Modelling[49] predicts the impact of a proposal to recalibrate Table 14.2 at district and regional level will be that the negative effects on GDP of intensive farming land users achieving current Table 14.2 are reduced by 64% in Tararua district, 51% in the Rangitikei district and 68% in the Manawatū-Whanganui Region as a whole. Similarly the negative effects of achieving Table 14.2 on household consumption are predicted to reduce by 65% in Tararua district, 55% in the Rangitikei district and 76% in the Manawatū-Whanganui Region. As the proposed provisions seek to recalibrate Table 14.2 and provide a viable pathway for intensive farming land users to apply for consent it is expected that negative effects will be further decreased from recalibration of the Table 14.2 on its own.

[48] Ford, S, 2017: *Farm scale economic impact analysis of One Plan intensive land use provisions.* The Agribusiness Group, October 2017.
[49] NZIER. 2018 *The macroeconomic impacts of the One Plan's intensive land use provisions.* July 2018.

Social benefits	
No benefits of the status quo were identified in the Social Impact Assessment[50]. However, there are potentially some social benefits associated with the costs of compliance and/or enforcement being deferred for the time being, under the status quo.	The social impacts of the status quo and recalibration of Table 14.2 are detailed in the Social Impact Assessment and summarised in Section 4.5. The social impacts of re-calibration of Table 14.2 were evaluated and reported as mainly positive. The proposed provisions are expected to have additional benefits to social outcomes because in addition to recalibration of Table 14.2, a viable pathway for consent applications is provided for those existing intensive farming land users who cannot achieve Table 14.2 cumulative nitrogen leaching maximums. **Community and Industry** The impacts of re-calibrating Table 14.2 were assessed as mainly positive on the community and industry, and related to consented farmers and growers being able to continue farming and growing. Flow-on positive impacts on employment, the retention of community services, rural goods and service providers, town businesses and rural professionals were identified. Increased confidence among businesses in local towns such as Pahiatua, Dannevirke, Marton and Levin is anticipated due to increased certainty of continued farming operations. **Individual and family** At an individual and family level, the impacts of re-calibrating Table 14.2 were perceived as mainly positive. Intensive farming land users that are able to obtain a resource consent under the plan change proposal will have certainty of operation, and certainty will reduce some of the stress these currently unconsented land users face. Consented land users will be able to implement investment and expansion plans, with associated flow on effects to their local communities (e.g. increased employment and investment in goods and services). Intergenerational businesses will be able to plan for continued family ownership. Banks will also see the consented dairy farms to be of less risk, therefore, reducing downwards pressure on farm value and business equity. Certainty of operation is also anticipated to have a beneficial flow-on impact on the environment.

[50] Collins, Heather. 2018: *Social Impact Assessment Proposed Plan Change 2.* Report for Horizons Regional Council, 2018.

Cultural benefits	
There are no perceived cultural benefits from the status quo. Cultural benefits are closely aligned with expected improvements in water quality when the One Plan was introduced. While the short-comings of the One Plan intensive farming land use rules continue to be ineffective at achieving water quality improvements (and it is not considered to enforce the operative provisions) the mauri of water is not enhanced.	The cultural benefits will be mainly positive and consistent with those intended in the One Plan from controlling intensive farming land use activities. The mauri of freshwater in targeted water management Sub-zones will improve. The proposed provisions will allow intensive farming land users to make consent applications. These requiring mitigations to reduce nutrients, pathogen and sediment and will result in water quality improvements not occurring under the status quo. improvements
Costs	
Environmental costs	
Horizons monitoring and reporting indicates that water quality degradation caused by nutrients, pathogen and sediment is still a significant issue in the Region and, in particular, targeted Water Management Sub-zones. Control of these contaminants coming from intensive farming land uses is still required. There is an on-going cost to the environment while intensive farming land users requiring consents cannot meet the operative Table 14.2 and there is no viable consenting pathway to obtain consent to exceed it (such that, to date, there have been real difficulties and uncertainty around enforcement of the One Plan).. It is reported[51] that there is pressure on Horowhenua District Council to rezone land to enable land use change to occur in response increasing demand for subdivision and housing. Commercial vegetable growing is carried out on some of the very best production land (class I and II versatile soils) and if growers relocate there is potential for this land to be lost to urban development.	The proposed provisions provide intensive farming land users with a viable pathway to make consent applications if they cannot achieve the recalibrated Table 14.2 cumulative nitrogen leaching maximums. To be considered for this pathway land users must demonstrate at least good management practice, as well as additional measures to achieve a downward trajectory for nitrogen leaching. Considerations in determining whether to grant such application will include whether the proposed measures constitute the 'best practicable option'. It is expected that for these applications the reductions in phosphorus, pathogens and sediment will be the same if not better than if the application met Controlled Activity standards (Table 14.2). Although reduced by implementation of good management practice and additional mitigation measures, nitrogen leaching will, however, be higher than if the application achieved Table 14.2 cumulative nitrogen leaching maximums. There is an unknown environmental cost to water quality because each application for discretionary activity consent (i.e. where the recalibrated Table 14.2 is not met) will be determined on its merits and we cannot predict what level of nitrogen leaching will be authorised.

[51] Collins, Heather. 2018: *Social Impact Assessment Proposed Plan Change 2.* Report for Horizons Regional Council, 2018.

Economic costs	
The on-farm and macroeconomic impacts of the status quo have been modelled. It is understood that there are 118 dairy farms and 60 commercial vegetable growing operations that require a resource consent but currently have no pathway to apply for a consent. Almost no existing intensive farming land users requiring resource consent can achieve the operative Table 14.2 and there is no alternative pathway to make a consent application. Economic modelling[52] predicts that many of the unconsented dairy farms in the Upper Manawatū would be unlikely to remain economically viable if forced to achieve current Table 14.2 cumulative nitrogen leaching maximums. This would have a significant negative impact on the rural economy and employment. **Commercial vegetable growing** An assessment of the economic impact of mitigations required to reduce nitrogen losses to achieve Table 14.2 from cash cropping, intensive vegetable production and market gardening has been undertaken.[53] It was concluded that: • Intensive vegetable producers and market gardeners were predicted to experience a significant deterioration in their return on investment (as significant changes would be required to mitigate or offset leaching so as to comply with the table). It was considered that these growers would find it more attractive to move their operations to an area where they were not required to meet such targets, than to go to the additional cost of the modelled mitigations; and • The most effective means of mitigation that is possible to ensure that a vegetable grower can continue to grow vegetables whilst meeting the requirements of the existing planning regime would be to buy additional land that they could farm less intensively which would balance the whole farm N leaching result to meet cumulative nitrogen leaching maximums.	The intent of the proposed provisions is to reset the cost of compliance with the intensive farming land use provisions to a level, that was anticipated when the One Plan was introduced/made operative. **Costs associated with good management practice** There is potential for an increased scope and potential costs from increased requirements for good management practice during resource consent application processes. The new discretionary pathway (for longer term consents) also requires additional steps over and above 'standard' good management practice (essentially, the best practicable option) where an intensive land user cannot achieve Table 14.2 cumulative nitrogen leaching maximums. However, it is arguable whether the potential for increased costs is any different to what would normally be expected under the status quo, given that there are a number of mitigations available and used by some land users to make reductions in nitrogen leaching. It was also always the case that those activities exceeding the table would need to adopt additional measures in order to eventually be achieving the table (as intended by the downward trajectory towards meeting the nutrient leaching maximums). The cost/benefit relationship for mitigations is complicated[55]. A mitigation such as applying nitrogen fertilizer to meet plant demand at times and in conditions that result in maximum uptake will both reduce nitrogen leaching and save the land user money. The cost of some mitigations is dependent on the level of application, e.g., the cost of stocking rate management is highly variable depending on the extent and timing of stock reduction. Off-paddock infrastructure, such as a herd home or covered feed pad currently goes beyond industry recognised good management practice. This is expensive to install and run ($1000 - $2,000 per cow), but have significant advantages for farm management, stock health and welfare, as well as reducing nitrogen leaching loss. It is anticipated that the costs and benefits of good management practice will be very much determined on a case by case basis, depending on the scope of contaminant reduction

[52] Parminter, T, 2018: *A comparison of changes to nitrogen loss allowances on dairying in the Upper Manawatū river catchment*. Kapag Ltd, May 2018.
[53] Ford, S, 2017: *Farm scale economic impact analysis of One Plan intensive land use provisions.* The Agribusiness Group, October 2017.
[55] McNab, I, 2019: Rural Advisor, Horizons Regional Council, pers. comm.

Macroeconomic modelling

The results of macroeconomic modelling[54] predict that compliance with the current Table 14.2 cumulative nitrogen leaching maximums by intensive farming land users would have negative effects on local, regional and national economies, as well as have flow on effects to peripheral industries, such as retail, agricultural supplies, transportation and logistics, which are also impacted by the consequential primary sector slowdown.

In particular the modelling predicts:

- Additional costs from achieving current Table 14.2 cumulative nitrogen leaching maximums lead to lower agricultural production. Dairy production is predicted fall by 28% in Tararua and by 22% in Rangitikei and commercial vegetable production in Horowhenua decreases by 64%;
- This leads lower predicted regional GDP and household spending. GDP decreases by 4.9% or $34.7 million in Tararua, 2.5% or $13.6 million in Rangitikei, and 1.4% or $12.1 million in Horowhenua;
- Household spending as a proxy for regional welfare, decreases. Consumption falls by 3.2% or $14.6 million in Tararua, 1.0% or $4.3 million in Rangitikei, and 1.7% or $11.4 million in Horowhenua;
- Real wages decrease by 1.6% in Tararua, 0.5% in Rangitikei and 0.9% in Horowhenua as these economies slow and the demand for labour drops; and
- GDP in the Manawatū -Wanganui region falls by $65.4 million for the original Table 14.2 limits, and $20.7 million for the revised limits.

There have been and may be further costs to Horizons in implementing the status quo. The problems with the current provisions has led and may lead to further debate and potential litigation. This undermines the Plan and its implementation. It also raises equity issues when some farmers have been consented and others do not have a viable consenting pathway to make an application.

required and the mitigations best suited to the particular intensive farming land use situation.

Costs associated with the consent process

Intensive farming land users will bear the cost of preparing and processing of a consent application, however the costs associated with the consent process are already incurred by consent applicants under the status quo. It is anticipated that the costs associated with consent process under the proposed provisions will be similar to the status quo.

The costs associated with the current consent process have been estimated[56]. The costs associated a Controlled Activity process were assessed at $8,500. The costs associated a Restricted Discretionary Activity process where Table 14.2 cumulative nitrogen leaching maximums are achieved is estimated in the range of $12,500 to $22,000 depending on complexity. The cost of associated with the consent process where the Table 14.2 cumulative nitrogen leaching maximums were not achieved were estimated as $25,500 if non-notified or $45,500 to $55,500 if notified. This latter estimate should be similar to the cost associated with the consent process for the discretionary pathway outlined in the proposed provisions.

There may also be additional costs associated with the 'best practicable option' measures to reduce nitrogen leaching that are proposed as part of a consent application, insofar as these go further than good management practice and require additional innovation and measures. However, these costs were already anticipated by the consenting pathway envisaged at the time the One Plan was made operative (i.e. the costs to reduce nitrogen leaching back down to the values in Table 14.2).

[54] NZIER. 2018 *The macroeconomic impacts of the One Plan's intensive land use provisions.* July 2018.
[56] Parminter, T, 2018: *An impact assessment of One Plan policies and rules on farming systems in the Tararua District and the Manawatū-Wanganui Region*. KapAg, January 2018.

Social costs	
The social impacts of the status quo detailed in the Social Impact Assessment[57] and summarised in Section 4.5. The social impacts of the status quo are assessed as negative. **Individual and family** The status quo will result in continued uncertainty for dairy farmers and commercial vegetable growers because of the uncertainty about their future in farming and growing. It will not improve unconsented farmers, growers and their families' way of life. Without certainty of operation, future plans for expansion and investment are on hold. The status quo will also decrease individual farmers and growers' personal and property rights. Dairy farmers and some rural professionals expect financial institutions will continue to perceive unconsented dairy farms as an increased risk to their businesses. **Community** The status quo is anticipated to reduce community wellbeing and way of life. The longer dairy farms and commercial vegetable growing businesses remain unconsented, the risk of forced exit from the industry is perceived to increase. In addition, some businesses may need to reduce production to obtain an intensive farming land use consent. Both scenarios are anticipated to result in a loss of jobs, which may result in families moving away from their community in search of employment, and the flow-on impact of depopulation. In addition, if or when enforcement action is taken to require compliance with the operative Table 14.2, this would have social costs associated with the economic costs identified above.	Uncertainty and stress will remain for these land users that are unable to make a successful application under the framework. Although the proposed pathway option which provides time for transition from an intensive land use to an alternative land use may provide some mitigation, especially if there is industry support available to achieve that transition. It is also reported that the commercial vegetable growers, in particular, are aware that without an intensive farming land use consent they remain vulnerable to enforcement of One Plan rules and a perceived forced exit from the industry

[57] Collins, H, 2018. *Social Impact Assessment Proposed Plan Change 2.* Heather Collins Consulting, 2018.

Cultural costs	
In terms of freshwater, the cultural costs are closely aligned with whether there is ongoing improvement in water quality or not. While the short-comings of the One Plan intensive farming land use rules continue to be ineffective at achieving water quality improvements (and are not being actively enforced by Horizons) the mauri of freshwater in targeted Water Management Sub-zones is not enhanced as anticipated when the One Plan was introduced.	The cultural costs of the status quo are anticipated to be addressed at least in part by the proposed provisions because the mauri of freshwater in targeted water management Sub-zones will improve as contaminants from the remaining intensive farming land users are controlled through consent conditions. The proposed provisions will allow intensive farming land users that cannot meet the recalibrated Table 14.2 cumulative nitrogen leaching maximums to make consent applications that are considered through a viable consenting pathway. Although consent being granted for activities that do not meet the nitrogen leaching maximums was anticipated in the operative One Plan (as a restricted discretionary activity), the new discretionary pathway in the proposed provisions could be seen as compromising water quality improvements. However, although reductions in nitrogen may be lower or delayed, the provisions require a higher level of good management practice controls in terms of other key contaminants such as phosphorus, pathogens and sediment. It is expected therefore that there will be an overall improvement from the status quo.
Effectiveness	
The status quo provisions are no longer considered fit for purpose. They do not satisfy Policy 5.8 and the intention that most farms could meet Table 14.2 through good management practice, and the consenting option for those above Table 14.2 values is not viable. While in a strict sense enforcing the operative provisions remain an 'effective' option to progress toward achieving One Plan water quality objectives, there are difficulties in bringing enforcement action given that given most intensive farming land users cannot meet the operative Table 14.2 and there is no viable consenting pathway to obtain resource consents to exceed it. This raises issues in terms of the integrity of the One Plan, and also the ability for Horizons to take action to enforce its plan. For all of the above reasons the provisions as they stand are not considered 'effective'.	The proposed provisions are more effective than the status quo because they will in practical terms improve implementation of the intensive farming land use provisions for existing land users. The plan change will meet environmental objects better than the status quo. And the purpose of the plan change will be achieved because the regulatory framework will operate as intended when the One Plan was introduced. The proposed provisions establish a new good management practice bottom line (as well as additional requirements where the recalibrated Table 14.2 cannot be met). This will effectively set up a minimum standard for farming practices and contaminant mitigations that will provide more certainty for intensive farming land users and benefit water quality. The provisions also provide an early resolution of the current issue with the provisions and mitigate short-term legal risks perceived by Horizons relating to implementation of the status quo provisions.

Efficiency	
The status quo provisions are not efficient. The current uncertainty and ambiguity of the status quo provisions for existing intensive farming land use activities undermines implementation of the One Plan. While enforcing as the provisions as they stand might be 'effective' in driving improvements to water quality, the social and economic costs would be substantial (and there would be an element of unfairness to existing operators, who may not have actually changed their operations since the One Plan was notified but are now unable to comply). Analysis of benefits and costs of the status quo provisions shows that environmental, economic, social and cultural costs of enforcing the status quo significantly outweigh the benefits.	The proposed provisions are more efficient than the status quo. There will be more certainty for One Plan users and intensive farming land users that need resource consents will be able to make consent application and get back into a consenting regime. Analysis of the benefits and costs of the proposed provisions shows that environmental, economic, social and cultural benefits outweigh the costs.
Economic Growth and Employment provided or reduced	
If intensive farming land users are forced to meet Table 14.2 cumulative nitrogen leaching maximums, macro-economic modelling[58] predicts that negative economic effects including wage decreases and declining demand for labour are not just felt within the dairy, commercial vegetable growing and cropping industries, but carry through to the wider economy, including supplying industries such as transport and logistics, through to local retail and more distant markets and exports. Commercial vegetable growers in the Horowhenua cannot achieve the operative Table 14.2 while also achieving an acceptable rate of return on investment, so enforcement of the status quo would have significant negative effects on employment if the businesses relocate outside the Horowhenua district. The authors also predict that following an initial contraction of the dairy and horticulture industries (following enforcement of the status quo provisions), resources, including labour, capital and land, would eventually be adapted to exploit new opportunities. However, the time for this adaptation to occur is unknown, and would depend on the ability for affected workers to reskill, as much as for businesses to recalibrate into competitive industries and enterprises.	It was known that there would be some negative impact for intensive farming land use activities at the time the One Plan was introduced[59]. The impacts of the proposed provisions on the local economy and employment are predicted to land more softly than the status quo. Macroeconomic modelling based predicts that in Tararua District a proposal to just recalibrate Table 14.2, results in an estimated decrease in labour demand and wages of 8.1% and 8.6% respectively by year 20 (as compared with 23.2% and 24.5% under the operative Table 14.2 cumulative nitrogen leaching maximums). Similarly, macroeconomic impacts of the proposal on GDP, labour and wages in the Rangitikei are approximately half of the magnitude of the impact of meeting the current Table 14.2. It was assumed none of the commercial vegetable growers could achieve the existing of recalibrated Table 14.2 cumulative nitrogen leaching maximums, so these were not modelled. At that time the proposal did not include provisions providing a viable pathway for intensive farming land users that cannot achieve table 14.2 cumulative nitrogen leaching maximums. The current proposal does have a viable pathway for consent applications

[58] NZIER. 2018 *The macroeconomic impacts of the One Plan's intensive land use provisions.* July 2018.
[59] NZEnvC 182, 2012: Part Five - *Surface Water Quality-– non-point source discharges*, clauses 5-159 to 5-177.

	and it is anticipated that this will further mitigate negative effects on economic growth and employment versus enforcement of the status quo
Appropriateness	
The status quo provisions are not appropriate as they are not operating as intended when the One Plan was introduced. They are not effective in practical terms, and while 'effective' in the sense that they could be enforced to bring about water quality improvements, that would certainly not be efficient and so the provisions are inappropriate overall.	The plan change provisions are more efficient and effective than not addressing the short-comings of the status quo provisions. The plan change will achieve water quality improvements while reducing the economic and social costs for existing intensive farming land users. Improved water quality will mitigate the some of the cultural cost of the status quo.
Risk of acting or not acting if there is uncertain or insufficient information	
It is considered that the evidence underpinning this report is sufficient to demonstrate that the proposal is more efficient and effective than the status quo. There is sufficient information about ongoing water quality degradation to be confident that action needs to be taken to enhance it. Control of existing intensive farming land use activities in targeted Water Management Sub-zones is intended to contribute to that objective. There will always be some uncertainty associated with the use of models like Overseer in regulating land use activities. However, this uncertainty does not justify taking no action. There remains a possibility that further updates to Overseer will result in similar issues with 14.2 arising in the future, however the policies are drafted to enable this (i.e. the extent to which non-compliance with the table is due to changes in Overseer) to be taken into account. Although there is an estimate of the costs associated with the proposed consenting process for the discretionary pathway for intensive farming land use activities that cannot achieve Table 14.2, there is some uncertainty in the actual costs, especially for commercial vegetable growing. There is sufficient research to demonstrate that good management practice is effective at reducing discharges of contaminants from agricultural land, however, good management practice and mitigation methods for contaminants such as nitrogen, phosphorus, pathogens and sediment are subject to on-going development. It is considered that impact of further research will enhance implementation of the provisions rather than be an impediment. It is therefore considered that the risks associated with pursuing a plan change based on the proposed provisions are acceptable.	

9. Reasons for deciding on provisions[60]

The most appropriate option for a Plan Change 2 are the proposed provisions because:

- Their environmental, economic, social and cultural benefits out-weigh the costs;
- They are more effective and efficient than the status quo provisions;
- They are the most appropriate way to respond to the ambiguity and uncertainty of the status quo provisions;
- The impact on economic development and employment is significantly less than enforcing the status quo provisions; and
- Although there are some risks related a plan change based on the proposed provisions the risk not acting is outweighed by the risk of acting.

The draft Plan Change wording is set out at **Appendix A**. In terms of the reasons for deciding on the proposed provisions (at a more granular or drafting level):

- Policy 5-8 is amended to provide for exceptions to the general position that existing intensive land use must "achieve" the nitrogen leaching maximums. This is necessary to enable a viable consenting pathway for consideration of applications where Table 14.2 cannot be met (and this change at RPS level is required so that the more detailed amendments in Chapter 14 will 'give effect to' the RPS). Associated changes include:
    - Refinements or tidy-ups to clause (a):
        - Clause (B) is proposed to be deleted; this does not signal a change in the role of Table 14.2, but was considered an appropriate rationalisation given nitrogen leaching maximums as a regulatory tool are not in and of themselves sufficient to 'achieve' the strategies (instead all of the measures in Policy 5-8 contribute to achieving the strategies), and the more appropriate reference to the strategies is in Policy 14-6.
        - Clause (D) (formerly (E) has been streamlined: Table 14.2 provides for progressive reductions over a twenty year period (consistent with this direction in the Policy), and the text to be deleted was really an explanation as to why this was appropriate rather than prescribing circumstances in which it applies.
    - A new general requirement on all intensive farming land use activities (both new and existing) to implement 'good management practice' to manage nutrient leaching and run-off, faecal contamination, and sediment losses in accordance with good management practices*. This requirement applies even where Table 14.2 is able to be met, as nitrogen is only part of the picture and there could still be gains to be made in other areas. A new definition of 'good management practice' and associated amendments to Policy 14-3 are also proposed in order to provide greater guidance on what good management practice involves.
- A new method is proposed to support initiatives to find viable alternatives for that will have difficulty in achieving the cumulative nitrogen leaching maximums* (refer Table 14.1).
- A second new method is proposed to provide information on any further updates to overseer or related models. Such information will be provided for information purposes only and will not form part of the One Plan, although it may help applicants to

[60] Intended to fulfil the requirements of [RMA s32 (1)(b)(iii)].

understand whether exceedances of Table 14.2 in the future are attributable to changes in Overseer (which is a proposed matter for consideration in Policy 14-6).

- Policy 14-5 is amended to provide an exception (detailed in Policy 14-6) to the general position that existing intensive farming land uses must be managed to ensure nitrogen leaching does not exceed the values in Table 14.2.
- Policy 14-6 sets out the two exceptions to the general position that activities cannot be authorised if the Table 14.2 nitrogen leaching values cannot be met. These are where:
    - Measures over and above good management practice are implemented to achieve progressive reductions in nitrogen leaching over time. The matters for consideration include whether such measures constitute the 'best practicable option', the overall contribution of the reductions to improvements in water quality (in terms of phosphorous, sediment, and faecal coliforms, not just nitrogen), and the strategies for water quality contained in Chapter 5. It is not anticipated or intended that resource consent will be able to be granted in all circumstances. However, the intention is to provide a viable pathway to consent being granted where farmers are doing all they reasonably can to reduce impacts on water quality in the circumstances.
    - The existing intensive farming land use is only intended to continue for a limited time (no more than five years), in order to enable the transition to an alternative land use. For such applications it will still be necessary to apply good management practice and ensure there is no increase in the level of nutrient leaching and run-off, faecal contamination and sediment losses from the land.
- Associated changes to the rules make activities that cannot comply with Table 14.2 a (full) discretionary activity under new rule 14-2A. Discretionary activity status was considered more appropriate than restricted discretionary (which is the position under the operative plan) in order to enable the full spectrum of matters to be taken into account, guided by the particular considerations set out in Policy 14-6.
- Table 14.2 is recalibrated in line with version 6.3.1 of Overseer.

Overall these provisions are considered to comprise the most appropriate response to the challenges giving rise to Plan Change 2. They will resolve the current calibration issue with Table 14.2, provide a viable pathway for activities that still cannot meet it, and also provide greater guidance to decision makers as to the circumstances in which resource consent should be granted.

APPENDIX A - Plan Change Proposal

Draft Existing Intensive Farming Land Uses Plan Change Provisions (Plan Change 2)

Proposed insertions are shown as underlined text; proposed deletions are shown as ~~strikethrough~~.

Policy 5-8: Management and ~~R~~regulation of intensive farming *land*^ use activities affecting groundwater and surface *water*^ quality

The effects of intensive farming *land*^ use activities on groundwater and surface *water*^ quality must be managed in the following manner:

(a) **Nutrients**

(i) Nitrogen leaching maximums must be established in the regional plan which:

(A) take into account all the non-point sources of nitrogen in the catchment

~~(B) will achieve the strategies for surface *water*^ quality set out in Policies 5-2, 5-3, 5-4 and 5-5, and the strategy for groundwater quality in Policy 5-6~~

(B) ~~(C)~~ recognise the productive capability of *land*^ in the *Water Management Sub-zone**

(C) ~~(D)~~ are achievable on most farms using *good management practices**

(D) ~~(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 *land*^ use activities must be regulated in targeted *Water Management Sub-zones** to achieve the nitrogen leaching maximums specified in (i) except as provided for in (iia) and (iib) below.

(iia) 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**, and additional measures to minimise the degree of non-compliance, having regard to:

(A) the feasibility, practicality, and cost of achieving the nitrogen leaching maximums specified in (i); and

(B) the strategy for surface *water*^ quality set out in Policies 5-2, 5-3, 5-4 and 5-5, and the strategy for groundwater quality in Policy 5-6.

(iib) Existing *land*^ use activities which do not comply with (ii) but are intended to transition to an alternative non-intensive farming *land*^ use 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).

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

(b) **Faecal contamination**

(i) Those persons carrying out existing intensive farming *land*^ use activities in the targeted *Water Management Sub-zones** listed in Table 14.1 or new conversions to intensive farming *land*^ use activities anywhere in the Region must be required, amongst other things, to:

(A) prevent cattle access to some surface *water bodies*^ and their *beds*^

(B) mitigate faecal contamination of surface *water*^ from other entry points (e.g., race run-off)

(C) establish programmes for implementing any required changes.

(c) **Sediment**

(i) 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 the preparation 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.

(d) ***Good management practices****

(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**.

Method 5-12	Innovative Land Use Research
Description	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 will be a priority in order to find viable options for intensive farming land users that will have difficulty in achieving the *cumulative nitrogen leaching maximums** (refer Table 14.1). Horizons will provide assistance through providing data and information that will assist in the identification and evaluation of innovative land use options and participating in any evaluative work as appropriate.
Who	Local communities, rural and other sector groups, Territorial Authorities, Regional Council.
Links to Policy	This method implements Policies 5-7 and 5-8.
Target	Advice and assistance is available for landowners in the Region regarding land use management practices.

Method 5-13	Provision of Information
Description	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.
Who	Regional Council, rural sector groups, and nutrient management model providers.
Links to Policy	This method implements Policy 5-8.
Target	• Horizons will consider whether it needs to respond to changes in Overseer through a plan change process. • A list of nutrient management models appropriate for use in intensive farming land is maintained on Horizons' website.

Policy 14-3: ~~Industry-based standards~~ *Good management practices**

When making decisions on *resource consent*^ applications, and setting consent conditions, for *discharges*^ of *contaminants*^ onto or into *land*^, ~~T~~the Regional Council must have regard to *good management practices** ~~will examine on an on-going basis relevant industry-based standards (including 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~~ *good management practices** address the matters in Policies 14-1, 14-2, 14-4, ~~and~~ 14-5 and 14-6.

…

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:

(a) The following land uses have been identified as intensive farming *land*^ uses:

- (i) *Dairy farming**
- (ii) *Commercial vegetable growing**
- (iii) *Cropping**
- (iv) *Intensive sheep and beef**

(b) The intensive farming *land*^ uses identified in (a) must be regulated where:

- (i) They are existing intensive farming *land*^ uses, in the targeted *Water Management Sub-zones** [65] identified in Table 14.1.
- (ii) They are new (ie., established after the Plan has legal effect[6]) intensive farming *land*^ uses, in all *Water Management Sub-zones** in the Region.

(c) Nitrogen leaching maximums have been established in Table 14.2.

(d) Except as provided for in Policy 14-6(d), ~~E~~existing (ie., established prior to the Plan having legal effect[7]) 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

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[65] The Plan has legal effect in the case of existing intensive farming *land*^ uses in these zones from the dates identified in Table 14.1.

[6] The Plan has legal effect in the case of *dairy farming** from 24 August 2010 and for *commercial vegetable growing**, *cropping** and *intensive sheep and beef** it has legal effect from 9 May 2013.

[7] The Plan has legal effect in the case of *dairy farming** from 24 August 2010 and for *commercial vegetable growing**, *cropping**, and *intensive sheep and beef** it has legal effect from 9 May 2013.

the *cumulative nitrogen leaching maximum** values for each year contained in Table 14.2~~, unless the circumstances in Policy 14-6 apply~~.

(e) New intensive farming *land*^ uses regulated in accordance with (b)(ii) 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.

(f) Intensive farming *land*^ uses regulated in accordance with (b) must exclude cattle from:

(i) A *wetland*^ or *lake*^ that is a *rare habitat**, *threatened habitat** or *at-risk habitat**.

(ii) Any *river*^ that is permanently flowing or has an *active bed** width greater than 1 metre.

(g) All places where cattle cross a river that is permanently flowing or has an *active bed** width greater than 1 metre must be culverted or bridged and those culverts or bridges must be used by cattle whenever they cross the river.

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) Ensure implementation of *good management practices** to manage nutrient leaching and run-off, faecal contamination and sediment loss, as part of any intensive farming *land*^ use.

~~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 *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.~~

~~Where an exception is made to the *cumulative nitrogen leaching maximum** the existing intensive farming *land*^ uses must be managed by consent conditions to ensure:~~

~~(i) Good management practices to minimise the loss of nitrogen, phosphorus, faecal contamination and sediment are implemented.~~

~~(ii) Any losses of nitrogen, which cannot be minimised, are remedied or mitigated, including by other works or environmental compensation. Mitigation works may include but are not limited to, creation of wetland and riparian planted zones.~~

(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 cases any unavoidable losses of nitrogen, phosphorus, faecal contamination and sediment are remedied or mitigated by other works or environmental compensation. ~~Mitigation works may include (but are not limited to) creation of wetland and riparian planted zones.~~

(d) Provide for exceptions to (a) for existing intensive farming *land*^ uses that exceed the *cumulative nitrogen leaching maximum** where:

(i) *Good management practices** are 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

(ii) The existing intensive farming *land*^ use is to continue for no longer than five years in order to enable the transition to an alternative non-intensive farming *land*^ use without an increase in nutrient leaching and run-off, faecal contamination and sediment losses from the *land*^ over that period of time.

(e) When determining whether to enable an existing intensive farm *land*^ use to continue under (d)(i), have regard to:

(i) Whether the proposed innovations and measures represent the *best practicable option*^ to minimise the nutrient leaching and run-off, faecal contamination and sediment losses from the *land*^, having particular regard to:

(A) The extent of the exceedance of the *cumulative nitrogen leaching maximum** in Table 14.2;

(B) The rate of reduction of nitrogen loss towards the *cumulative nitrogen leaching maximum** for any given year in Table 14.2;

(C) Whether further reductions are currently possible for the intensive farming *land*^ use based on existing technologies.

(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;

(iii) The nature and characteristics of the *land*^, having regard to physical characteristics of the soil including in terms of attenuation capacity, climatic conditions, and topography of the property;

(iv) The contribution of the progressive reduction in nutrient leaching and run-off, faecal contamination and sediment losses from the *land*^, over time, to the improvement of *water*^ quality within that *Water Management Sub-zone**;

(v) The strategy for surface *water*^ quality set out in Policies 5-2, 5-3, 5-4 and 5-5, and the strategy for groundwater quality in Policy 5-6.

(f) When determining whether to enable the existing intensive farming *land*^ use to continue under (d)(ii), have regard to:

(i) Measures implemented in accordance with a *nutrient management plan** to ensure that nutrient leaching and run-off, faecal contamination and sediment losses from the *land*^ do not increase over the duration of the *resource consent*^;

(ii) *good management practices** proposed to avoid, remedy or mitigate nutrient leaching and run-off, faecal contamination and sediment losses from the *land*^;

(iii) the nature, sequencing, measurability and enforceability of any steps proposed to transition out of the intensive farming *land*^ use by the expiry of the *resource consent*^.

…

~~a.~~ **Rules - Agricultural Activities**

Table 14.1 sets out the target *Water Management Sub-zones** where management of existing intensive farming *land*^ use activities must be specifically controlled.

Table 14.1 Targeted *Water Management Sub-zones**

Catchment	*Water Management Sub-zone**	Date the Rules of the Plan have legal effect[62] in relation to Rule 14-1
Mangapapa	Mangapapa Mana_9b	1 July 2014
Waikawa	Waikawa West_9a Manakau West_9b	1 July 2014
Other south-west catchments (Papaitonga)	Lake Papaitonga West_8	1 July 2014
Mangatainoka	Upper Mangatainoka Mana_8a Middle Mangatainoka Mana_8b Lower Mangatainoka Mana_8c Makakahi Mana_8d	1 July 2015
Other coastal lakes	Northern Manawatū Lakes West_6 Kaitoke Lakes West_4	1 July 2015

[62] The Plan has legal effect in the case of *dairy farming** from 24 August 2010 and for *commercial vegetable growing**, *cropping** and *intensive sheep and beef** it has legal effect from 9 May 2013.

Catchment	*Water Management Sub-zone**	Date the Rules of the Plan have legal effect[62] in relation to Rule 14-1
	Southern Wanganui Lakes West _5	
Coastal Rangitikei	Coastal Rangitikei Rang_4	1 July 2015
Lake Horowhenua	Lake Horowhena Hoki_1a Hokio Hoki_1b	I July 2015
Upper Manawatū above Hopelands	Upper Manawatū 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
Manawatū above gorge	Hopelands-Tiraumea Mana_6 Upper Gorge Mana_9a Mangaatua Mana_9c	1 July 2016

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**.

Table 14.2 *Cumulative nitrogen leaching maximum** by *Land Use Capability Class**

Period (from the year that the rule has legal effect[639])	*LUC** I	*LUC** II	*LUC** III	*LUC** IV	*LUC** V	*LUC** VI	*LUC** VII	*LUC** VIII
Year 1	51 ~~30~~	45 ~~27~~	40 ~~24~~	29 ~~18~~	25 ~~16~~	24 ~~15~~	11 ~~8~~	3 ~~2~~
Year 5	46 27	42 ~~25~~	35 ~~21~~	26 ~~16~~	20 ~~13~~	16 ~~10~~	8 ~~6~~	3 ~~2~~
Year 10	44 26	37 ~~22~~	32 ~~19~~	23 ~~14~~	20 ~~13~~	16 ~~10~~	8 ~~6~~	3 ~~2~~
Year 20	43 ~~25~~	35 ~~21~~	30 ~~18~~	21 ~~13~~	19 ~~12~~	16 ~~10~~	8 ~~6~~	3 ~~2~~

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
14-1 Existing intensive farming *land^* use activities	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 and from the dates specified in Table 14.1 and any of the following *discharges^* pursuant to ss15(1) or 15(2A) RMA associated with that intensive farming: (a) the *discharge^* of *fertiliser** onto or into *land^*	**Controlled**	(a) A *nutrient management plan** must be prepared for the *land^*, and provided annually to the Regional Council. (b) The activity must be undertaken in accordance with the *nutrient management plan** prepared under (a). (c) The *nutrient management plan** prepared under (a) must demonstrate that the nitrogen leaching loss from the activity will not exceed the *cumulative nitrogen leaching maximum** specified in Table 14.2. (d) Cattle must be excluded from: (i) *wetlands^* and *lakes^* that are a *rare habitat** or *threatened habitat**, *and* (ii) the *beds^* of *rivers^* that are permanently flowing or have an *active bed** width greater than 1 m.	Control is reserved over: (a) the implementation of the *nutrient management plan** (b) ~~compliance with the *cumulative nitrogen leaching maximum** specified in Table 14.2~~ *good management practices** to avoid, remedy or mitigate nutrient leaching and run-off, faecal contamination and sediment losses from the *land^* (c) the matters of control in Rule 14-11 (d) avoiding, remedying or mitigating the effects of odour, dust, *fertiliser** drift or effluent drift (e) provision of information including the *nutrient management plan**

[963] The Plan has legal effect in the case of *dairy farming** from 24 August 2010 and for *commercial vegetable growing**, *cropping** and *intensive sheep and beef** it has legal effect from 9 May 2013.

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	(b) the *discharge*^ of *contaminants*^ onto or into *land*^ from (i) the preparation, storage, use or transportation of stock feed on *production land*^ (ii) the use of a *feedpad** (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*^ (or upon expiry or surrender of any existing consent for that *discharge*^) including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(1) or 15(2A) RMA. Where the existing intensive farming *land*^ use is located partly on land within one or more of the *water management sub-zones** listed in Table 14.1 and partly on other land, this rule only applies: (a) if at least 20% of the existing intensive farming *land*^ use is located on land within the listed		(e) *Rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m, that are crossed by cattle must be bridged or culverted, and the cattle must cross via that bridge or culvert, and run-off originating from the carriageway of the bridge or culvert must be *discharged*^ onto or into *land*^. (f) The *discharge*^ of *fertiliser** onto or into *land*^ and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 14-5. (g) The *discharge*^ of *contaminants*^ onto or into *land*^ from: (i) the preparation, storage, use or transportation of stock feed on *production land*^, or (ii) the use of a *feedpad** and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 14-6. (h) The *discharge*^ of *grade Aa biosolids** or *compost** onto or into *production land*^ and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 14-7. (i) The *discharge*^ of *poultry farm litter** onto or into *production land*^ and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 14-9. (j) The *discharge*^ of farm *animal effluent** onto or into *production land*^ including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent	(f) duration of consent (g) review of consent *conditions*^ (h) compliance monitoring (i) the matters in Policies 14-5, 14-6 and 14-9. *Resource consent*^ applications under this *rule*^ will not be notified and written approval of affected persons will not be required (notice of applications need not be *served*^ on affected persons).

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	*water management sub-zones**; and (b) to the portion of the existing intensive farming *land*^ use that is located within the listed *water management sub-zones**.		and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^, standards and terms of Rule 14-11.	
14-2 Existing intensive farming *land*^ use activities not complying with <u>any of the conditions, standards and terms (a), (b) and (d) to (i) of</u> Rule 14-1	The use of *land*^ pursuant to s9(2) RMA for any of the following 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 and from the dates specified in Table 14.1, and any of the following *discharges*^ pursuant to ss15(1) or 15(2A) RMA associated with intensive farming, that do not comply with one or more of the *conditions*^, standards and terms of Rule 14-1 <u>(except for (c))</u>: (a) the *discharge*^ of *fertiliser** onto or into *land*^ (b) the *discharge*^ of *contaminants*^ onto or into *land*^ from (i) the preparation, storage, use or transportation of stock feed on *production land*^ (ii) the use of a *feedpad**	**Restricted Discretionary**	<u>(a) A *nutrient management plan** must be prepared for the *land*^, and provided annually to the Regional Council.</u> <u>(b) The activity must be undertaken in accordance with the *nutrient management plan** prepared under (a).</u> <u>(c) The *nutrient management plan** prepared under (a) must demonstrate that the nitrogen leaching loss from the activity will not exceed the *cumulative nitrogen leaching maximum** for any year in Table 14.2.</u>	Discretion is restricted to: <u>(a)</u> preparation of and compliance with a *nutrient management plan** for the *land*^ <u>(b)</u> ~~the extent of non-compliance with the *cumulative nitrogen leaching maximum** specified in Table 14.2~~ <u>(b)</u> ~~(c) measures~~ <u>*good management practices**</u> to avoid, remedy or mitigate nutrient leaching <u>and run-off</u>, faecal contamination and sediment losses from the *land*^ <u>(c)</u> ~~(d)~~ measures to exclude cattle from *wetlands*^ and *lakes*^ that are a *rare habitat** or *threatened habitat**, and *rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m <u>(d)</u> ~~(e)~~ the bridging or culverting of *rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m that are crossed by cattle <u>(e)</u> ~~(f)~~ the matters referred to in the *conditions*^ of Rules 14-5, 14-6, 14-7, and 14-9

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	(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*^ (or upon expiry or surrender of any existing consent for that *discharge*^) including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(1) or 15(2A) RMA.			(f) ~~(g)~~ the matters referred to in the *conditions*^ of Rule 14-11 and the matters of control in Rule 14-11 (g) ~~(h)~~ avoiding, remedying or mitigating the effects of odour, dust, *fertiliser** drift or effluent drift (h) ~~(i)~~ provision of information including the annual *nutrient management plan** (i) ~~(j)~~ duration of consent (j) ~~(k)~~ review of consent *conditions*^ (k) ~~(l)~~ compliance monitoring (l) ~~(m)~~ the matters in Policy 14-9.
Rule 14-2A Existing intensive farming *land*^ use activities not complying with condition, standard, term (c) of Rule 14-1 or Rule 14-2.	The use of *land*^ pursuant to s9(2) RMA for any of the following 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 and from the dates specified in Table 14.1, and any of the following *discharges*^ pursuant to ss15(1) or 15(2A) RMA associated with intensive farming, that do not comply with conditions, standards and term (c) of Rule 14.1 or one or more of the *conditions*^, standards and terms of Rule 14-2:	**Discretionary**		

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	(f) the *discharge*^ of *fertiliser** onto or into *land*^ (g) the *discharge*^ of *contaminants*^ onto or into *land*^ from (i) the preparation, storage, use or transportation of stock feed on *production land*^ (ii) the use of a *feedpad** (h) the *discharge*^ of *grade Aa biosolids** or *compost** onto or into *production land*^ (i) the *discharge*^ of *poultry farm litter** onto or into *production land*^ (j) the *discharge*^ of farm *animal effluent** onto or into *production land*^ (or upon expiry or surrender of any existing consent for that *discharge*^) including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(1) or 15(2A) RMA.			

…

Rule Guide:

The location of archaeological sites when defined by a single co-ordinate is unlikely to define the true extent of subsurface archaeological evidence. The 50 metre rule should apply from the outer perimeter of the site.

Some activities in *rare habitats**, *threatened habitats** and *at-risk habitats** are regulated by Rules 13-8 and 13-9. Discharges from agricultural activities at other locations are regulated as follows:

(a) **Discharges not covered by rules** - Agricultural discharges pursuant to ss15(1) RMA that are not covered by the rules above are a **discretionary activity** under Rule 14-30.

~~(b) **Activities that do not comply** - Except for Rule 14-3, activities pursuant to ss15(1) or 15(2A) RMA that do not comply with the permitted or controlled activity rules above are a **discretionary activity** under general Rule 14-30.~~

Glossary

A term or expression that is defined in this glossary is marked with the symbol * when used in the Plan.

A term or expression that is defined in the Resource Management Act 1991 (RMA) and used in the Plan, but which is not included in this glossary, has the same meaning as in the RMA. Definitions provided in the RMA are not repeated in this glossary. A term or expression that is defined in the RMA is marked with the symbol ^ when used in the objectives, policies or rules of the Plan, this glossary and the schedules to the Plan, other than Schedules F, G and I.

When:

- * is not used to identify a term anywhere in the Plan, or
- ^ is not used to identify a term in the objectives, policies or rules of the Plan, this glossary or the schedules to the Plan

the term has its ordinary meaning.

...

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 nutrient leaching and run-off, faecal contamination and sediment losses to *land*^ and *water*^.

...

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 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.

APPENDIX B – Technical Reports

Carran, A, Clothier, B, MacKay, A and Parfitt, R, 2007: Appendix 6 – Defining nutrient nitrogen) loss limits within a water management zone on the basis of the natural capital of soil. An appendix to the Farm Strategies for Contaminant Management report by SLURI, the Sustainable Land Use Research Initiative, for Horizons Regional Council, June 2007.

Collins, H, 2018: *Social Impact Assessment Proposed Plan Change 2.* Report for Horizons Regional Council, 2018

Ford, S, 2017: *Farm scale economic impact analysis of One Plan intensive land use provisions.* The Agribusiness Group, October 2017.

Fraser, C and Snelder, T, (2019): *State and Trends of River Water Quality in the Manawatū-Whanganui Region*, prepared for Horizons Regional Council, Report No. 2018/EXT/1619, November 2018.

Hanly, J, and Horne, D, 2018: *Sensitivity of values in Table 14.2 of the One Plan to a change in the version of Overseer Parts A-C.* Fertiliser and Lime Research Centre, Massey University, July 2018.

Hill Young Cooper. *Manawatu-Wanganui Regional Council One Plan Section 35 Report: Intensive Farming.* (July 2018), p11.

Horizons Regional Council, 2017: "*Evaluation Report: Nutrient Management and Water Quality*," Strategy & Policy Committee agenda, Report No 17/57, Executive Summary, 12 April 2017.

Kirman C and Linzey A, 2018: "*Independent Planning and Legal Advice on the Manawatū-Whanganui Regional Council One Plan – Consenting Pathways for Dairy and Horticulture Activities,*" Ministry for the Environment, 20 November 2019.

NZIER. 2018 *The macroeconomic impacts of the One Plan's intensive land use provisions.* July 2018.

Ministry for the Environment & Stats NZ, (2019): *Environment Aotearoa 2019*. New Zealand's Environmental Reporting Series. Published by Ministry for the Environment and Stats NZ, April 2019.

Parminter, T, 2018: *An impact assessment of One Plan policies and rules on farming systems in the Tararua District and the Manawatū-Wanganui Region*. KapAg, January 2018.

Parminter, T, 2018: *A comparison of changes to nitrogen loss allowances on dairying in the Upper Manawatū river catchment*. Kapag Ltd, May 2018.

Patterson, M, et al, 2018: *Assessment of the Environmental Outcomes from Proposed Plan Change 2 – Table 14.2 Update.* Internal Memorandum, Horizons Regional Council, July 2018.

Ridler, B, 2016: *The feasibility of nutrient leaching reductions (N leaching) within the constraints of minimum impact on the profitability and production of five dairy farms in Horizons Region*, A Report for Horizons Regional Council, June 2016.

Ridler, B, 2017: *The feasibility of nutrient leaching reductions (N leaching) within the constraints of minimum impact on the profitability and production of three dairy farms in Horizons Region,* A Report for Horizons Regional Council, December 2018.

APPENDIX C – Record of consultation with Iwi

Date	Who	Details	Comments
15/05/2019	32 Participants and Observers (Ngāti Raukawa represented at workshop)	A workshop discussing the findings of road testing draft plan change provisions. Three scenarios were tested. Using the draft provisions, one team created an application and a second evaluated and processed the application. Representatives from Federated Farmers NZ, Horticulture NZ, Beef & Lamb NZ, Fish & Game NZ, Ngāti Raukawa, Ministry of Primary Industries, Tararua District Council, Royal Forest & Bird NZ (via Zoom) attended as observers.	The workshop was valuable in identifying the workability of the draft provisions and resulted in further evaluation and drafting in response to feedback. Ngāti Raukawa expressed discomfort with the draft provisions and wording changes, in part because it was too early tell what the environmental effects might be.
9/05/2019	Meeting with representatives from Rangitāne Iwi, Beef & Lamb NZ, Foundation for Arable Research.	An informal session to discuss the policy intent of plan change. Policy intent and activity cascade documents provided.	Purpose of meeting was to inform rather than seek feedback. Rangitāne represented at meeting.
11/04/2019	Ngā Tāngata Tiaki	Hui following up from all Iwi update. Discussed wider plan change proposal and seeking feedback on having hearing commissioner representing Māori world view.	Iwi listened. Acknowledged that biggest impact would be in targeted Water Management Sub-zones, not Whanganui River catchment. Positive feedback about hearing commissioner with Māori world view.
29-Mar-19	All Iwi in the Region	A follow up letter to previous Iwi consultation on plan change proposal, updating changes and seeking feedback on having hearing commissioner with Māori world view.	
9/10/2018	Te Roopu Ahi Kaa (Rangitīkei Dist Council)	Discussed recalibration of Table 14.2 and sought views on a Commissioner with understanding of tikanga Māori as part of any hearing panel.	Presentation received without any strong positive or negative feedback at the time.

4/10/2018	Ngāti Rangi	Met Taiao officer. Discussed rationale for PC2 and Ngāti Rangi response to original which did not support a plan change to recalibrate Table 14.2.	Helpful meeting to understand issues from both sides, especially the Ngāti Rangi perspective on conversions and use of Overseer. We will need to acknowledge Ngāti Rangi position as we proceed. Very strong support for Freshwater Futures programme as a way of addressing what are seen as short-comings in freshwater management in the One Plan.
18/09/2018	Ngāti Kahungunu	Offer to present and discuss plan change details for Table 14.2 recalibration.	No follow-up requested.
17/09/2018	Muaūpoko Tribal Authority	A relationship meeting where the details of the proposal to recalibrate Table 14.2 was discussed.	Feedback focussed on the need to continue to make water quality improvements to enhance Lake Horowhenua.
17/09/2018	Ngā Tāngata Tiaki	Email providing further information on plan change proposal requested by Ngā Tāngata Tiaki.	No follow-up required.
16/09/2018	Ngāti Hauiti	Email after plan change infographic distributed offering hui to discuss detail.	Interest in meeting, but Iwi needed to prioritise Treaty settlement hearings.
11/09/2018	Ngāti Apa	Email offering hui to discuss proposal in more detail.	No follow-up requested.
7/09/2018	Ngāti Rangi	Emailed information about plan change including infographic relating to recalibrating Table 14.2.	Response received not supporting a plan change to recalibrate Table 14.2. Led to meeting at Ohakune on 4/10/2018.
5/09/2018	Manawatū River Iwi	ManawatūRiver Iwi Leaders at Caccia Birch House. Rangitāne o Manawatū, Rangitāne o Tamaki Nui a Rua, Rangitāne Tū Mai Rā, Ngāti Kauwhata present. Presentation about plan change to recalibrate Table 14.2.	Presentation received without any strong positive or negative feedback at the time. Support for wider freshwater strategy development for the Manawatū River under proposed Freshwater Futures programme.

3/09/2018	Ngāti Kauwhata	Consultation hosted by Ngati Kauwhata at Iwi office in Feilding. Presentation about plan change to recalibrate Table 14.2.	No strong feedback about proposal, but the need to enhance the current water quality in the Oroua River was emphasised. Water quality suitable for food gathering and traditional cultural rituals is the ultimate goal.
29/08/2018	Rangitāne o Manawatū	Met chief Executive and taiao staff members. Outlined plan change and provided infographic	Neither supported nor opposed plan change. Concern expressed at potential underestimation of green house gas production from attenuation of nitrogen leached below the root zone.
24/08/2018	Ruapehu District Māori Council	Ruapehu District Māori Council and Ruapehu District Council Raumarunui. Presentation about plan change to recalibrate Table 14.2, including distribution of information and infographic.	Presentation received without any strong positive or negative feedback.
23/08/2018	Ngaa Rauru Kiitahi representatives	Hui following up on email foreshadowing plan change to recalibrate Table 14.2.	Presentation received without strong feedback supporting or opposing plan change.
17/08/2018	Ngāti Kahungunu	Email offering hui to discuss proposal in more detail.	No follow-up requested.
17/08/2018	Rangitāne o Tamaki Nui a Rua	Email offering hui to discuss proposal in more detail.	No follow-up requested.
10/08/2018	Non Manawatū Iwi	Letter foreshadowing preparation of plan change focussed on recalibrating Table 14.2. Included plan change infographic.	
10/08/2018	Ngā Tāngata Tiaki	Meeting with Chief Executive followed up with letter containing information about Plan change including infographic relating to recalibrating Table 14.2.	
3/08/2018	Manawatū River Iwi	Letter foreshadowing preparation of plan change focussed on recalibrating Table 14.2. Included plan change infographic.	

APPENDIX D - Record of consultation with stakeholders

20 June 2019	Ministry of Environment & Ministry of Primary Industry	An informal session to discuss Plan Change 2 provisions	
June 2019	Horticulture NZ Vegetable Growers	Ongoing discussions and meetings.	
24/05/2019	Minster Parker	April-May plan change progress report	
20/05/2019	Dairy Environment Leaders	Discussed plan change proposal, timeframes, objectives. scope and Our Freshwater Future plan moving forward. Group is keen to keep communicate going and suggested HRC have a spot at each meeting in the future.	
15/05/2019	32 Participants and Observers	A workshop discussing the findings of road testing draft plan change provisions. Three scenarios were tested. Using the draft provisions, one team created an application and a second evaluated and processed the application. Representatives from Federated Farmers NZ, Horticulture NZ, Beef & Lamb NZ, Fish & Game NZ, Ngāti Raukawa, Ministry of Primary Industries, Tararua District Council, Royal Forest & Bird NZ (via Zoom) attended as observers.	The workshop and feedback from participants and observers was valuable in identifying the workability of the draft provisions and resulted in further evaluation and drafting.
13/05/2019	Pahiatua farmers meeting	Policy update before other business. Attended by local farmers (consented for land use), approx. 12 farmers, covering high level where we are up to with plan change proposal.	General concern about nutrient management provisions and effects on rural area. Consented farmers concerned about the status of current consents, and the impacts of a recalibrated Table 14.2 on those consents.

10/05/2019	Ministry of Primary Industries, Fish & Game NZ, Horticulture NZ	An informal session to discuss the policy intent behind plan change proposal with stakeholders. Policy intent and activity cascade documents provided.	Purpose of meeting was to inform rather than seek feedback.
9/05/2019	Meeting with representatives from Rangitāne, Beef & Lamb NZ, Foundation for Arable Research	An informal session to discuss the policy intent of plan change. Policy intent and activity cascade documents provided.	Purpose of meeting was to inform rather than seek feedback.
1/05/2019	All households in Horizons region	Horizons' "Across the Region" mailout. Included a paragraph on plan change proposal and the process going forward.	"Across the Region" is a regular communication with ratepayers.
1/05/2019	Dairy E News subscribers	Across the Region mailout (in email form). Includes a paragraph on plan change proposal and the process going forward.	"Across the Region" is a regular communication with ratepayers.
29/04/2019	Royal Forest & Bird NZ	A short update about the basis for plan change at Horizons Regional Council office.	
10/04/2019	Tararua District Council staff	An informal session to discuss the policy intent of plan change. Policy intent and activity cascade documents provided.	Were mostly in agreeance with the plan change intent. Recommended our approach, felt we needed to talk at a political level with their councillors as well.

8/04/2019	Tararua District Council	Meeting with councillors to discuss the intensive farming land use provisions, current issues and indicative future plan change proposals.	Strong feedback on the social and economic consequences of the current impasse with intensive farming land use provisions on the farmers involved. Request that further meetings be held as plan change progresses as it is an important issue for the District.
9/04/2019	Local authorities	Letter to local authorities advising that Horizons was intending to initiate a wider plan change than originally proposed; advised the policy intent of the document; and indicated the date for notification.	
1/04/2019	Minister Parker	March/April plan change progress report.	
1/04/2019	BNZ Agri Team	An informal session to discuss the policy intent of plan change. Policy intent and activity cascade documents provided.	
27/03/2019	Claire Bekhuis and Briar Robertson Balance Agri Nutrients	An informal session to discuss the policy intent of plan change. Policy intent and activity cascade documents provided.	
26/03/2019	Nutrient Management Consultants	An informal session to discuss the policy intent of plan change. Policy intent and activity cascade documents provided.	
25/03/2019	Minister Parker	Feb-March 2019 plan change progress report.	
25/03/2019	Ministry for the Environment, Ministry for Primary Industries	Second update email on plan change progress.	
20/03/2019	Alastair Cole Landcare Trust	An informal session to discuss the policy intent of plan change.	

19/03/2019	Richard McIntyre and Aaron Passey Fish and Game	Newly elected F&G members. Informal session to update on nutrient management provisions and plan change proposals.	
18/03/2019	Rabobank	An informal session to discuss the policy intent of plan change proposal.	
14/03/2019	Federated Farmers NZ and public	Public presentation at the Federated Farmers NZ tent at Central Districts Field Days plan change proposals. Audience of seven people.	
11/03/2019	Ministry for the Environment, Ministry for Primary Industries	First update email on plan change progress.	
6/03/2019	Fonterra Sustainable Dairy Advisors	An informal session to discuss the policy intent of plan change proposal.	
21/02/2019	Federated Farmers NZ	An informal session to discuss the policy intent of plan change proposal.	
15/02/2019	Minister Parker	February 2019 plan change progress report	
3/10/2018	General public	Horizons website updated with three new webpages (One Plan Reviews and Changes, Nutrient Management - Supporting Information, and information on plan change proposal.	
1/10/2018	Tararua Farmers meeting	Rua Roa Hall - update on plan change proposal.	
28/09/2018	Tararua farmers meeting	Pahiatua - update on plan change proposal	

28/09/2018	Ministers, local authorities and stakeholders	Pre-notification consultation letter (as required by Clause 3, Schedule 1) for plan change proposal to recalibrate Table 14.2 providing a brief overview of content and process. Included the two information sheets.	Sent to Minister Parker, Minister O'Connor, Mayors & TA Chief Execs (10), industry groups, Environment Network Manawatūand national environmental NGOs.
26/09/2018	Rangitikei Farmers	Presentation to a group of Rangitikei farmers and industry at the Hawkestone Golf Club, outlining proposal to recalibrate Table 14.2.	Attended by approx. 30 farmers and industry
16/09/2018	TVNZ 6 p.m. News	Item on intensive farming land use rules featuring John Clarke (Woodhaven Gardens) and comments from Horizons Regional Council's Chairman	
13/09/2018	NZ Royal Forest and Bird Society	Email outlining potential plan change to recalibrate Table 14.2	
12/09/2018	Farmers on Dairy enews list	Advising farmer meetings at Hawkstone Golf Club, Pahiatua and Dannevirke. Also included link to PC2 summary information.	I think it's to about 400 (on subscription list), so not heaps. Its farmers and anyone else that wants to subscribe in Manawatū-Whanganui Region. Letters have also sent to farmer requiring resource consents. Meetings also advertised via Dairy NZ text alerts.
6/09/2018	Federated Farmers NZ	Communication with Federated Farmers about options for meetings.	Meeting clarified opportunities to get plan change material out to farmers.
4/09/2018	Lower North Island Rural Professionals	Presentation outlining plan change proposal to recalibrate Table 14.2.	Attended by approx. 50 staff.