

New Zealand Kiwifruit Growers Incorporated Suggestions for Resource Management Reform



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Foreword

The kiwifruit industry is New Zealand’s top horticultural export crop, being the fourth most valuable product behind dairy, meat and forestry. It contributes an average of \$4.3 billion per year in total expenditure, equivalent to \$2.18 billion in gross domestic product (“GDP”) to the New Zealand economy and provides a yearly average of 48,499 full-time equivalent jobs in New Zealand¹.

The Government has set a target to double the value of New Zealand exports over the next ten years. If the Government can help the industry to overcome regulatory, supply chain and infrastructure constraints, it can sustainably grow from \$4b in sales in the last financial year to around \$8b over the decade.

The ability of the industry to grow depends upon many important factors including labour supply, sufficient and well-functioning infrastructure, along with robust research, development and innovation. It also relies on the ability of growers to access suitable land and water and protect and nurture their vines, while delivering on sustainability goals that are being demanded by an increasingly discerning market and maintaining its social licence.

NZKGI welcomes the government’s plan to reform the resource management system, and to reduce its complexity through the establishment of the Ministry for Regulation. Regulation is a major driver of increasing costs for kiwifruit growers, and we are grateful for the opportunity to provide our suggestions in relation to regulatory change that would greatly assist growers, noting the ability to use water and apply nutrients is imperative for the industry.

In this document we describe our industry, what’s on growers’ minds, and what has the potential to hold us back from a resource management perspective. We suggest a number of changes, particularly but not limited to the Resource Management Act (1991), and the National Policy Statement for Freshwater Management, that would remove barriers, noting that there may be other ways to achieve the desired outcomes, for example through a National Policy Statement for Horticulture.

We understand that HortNZ is considering a National Environmental Standard (“NES”) for fruit and is working with the fruit product groups to gauge consensus on this approach. In our view an NES Fruit (or alternatively kiwifruit) would simplify a currently complex and costly regulatory system, cut red tape and provide certainty for all while protecting communities and the environment that we operate in. If our proposal for an NES finds favour, we would be more than willing to provide a draft of what that could look like.

We welcome the opportunity for further discussion.



New Zealand Kiwifruit Growers Incorporated
Mark Mayston - Forum Chair, and Colin Bond CEO

¹ BERL (2023) New Zealand kiwifruit industry’s contribution to well-being. New Zealand Kiwifruit Grower Incorporated.

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Executive Summary

The Government has set a target to double the value of New Zealand exports over the next ten years. If the Government can help the kiwifruit industry to overcome regulatory, supply chain and infrastructure constraints, it can sustainably grow from \$4b in sales in the last financial year to around \$8b over the decade.

The kiwifruit industry is New Zealand's top horticultural export crop, being the fourth most valuable product behind dairy, meat and forestry, and of the top four the most likely to have any chance of growth above inflation. When compared to the dairy industry, kiwifruit as an intensive land use creates 40 times more jobs per hectare, 35 times food per hectare, and 15 times export earnings per hectare² (and far greater again than sheep and beef).

The government's plan to reform the resource management system, and to reduce the complexity of the regulatory system through the establishment of the Ministry for Regulation, provides the opportunity to resolve current issues, areas of complexity and risks that are barriers to growth.

Poor policy and regulations can hinder productivity, profitability and stifle growth, and we are grateful for the opportunity to identify potential roadblocks, and to offer suggestions that would provide considerable relief, while understanding that there may be a number of ways of addressing the issues raised.

Growers know and understand the need for appropriate regulation to protect the environment and communities that they operate in, and to ensure that the product meets the demanding standards that our international customers require. But in our view, there are more efficient, less complex, and more sustainable ways of achieving the desired outcomes while maintaining growth.

We summarise our thoughts below.

National Consistency:

Growers, contractors and auditors who work in more than one district and region find the different rules for the same activity challenging. They do not understand why the requirements are different for a range of activities such as agrichemical spraying, orchard toilets, shelter, crop support structures, frost fans etc depending on the region or district that the orchards are located in.

To complicate matters further, growers must comply with label controls for individual agrichemicals as well as regional plan agrichemical rules, and in combination the rules have become complex and unwieldy. This is particularly an issue in Northland, where the definitions of effective shelter, buffer zones, and spray sensitive areas differ between the Hi-Cane label and regional plan requirements.

Growers and contractors accept the need to comply with sensible conditions, but the complexity of the many different rules has become unnecessarily complicated and confusing for growers, contractors and auditors, with the end result being increased costs for growers as they strive to understand and comply with multiple requirements.

An appropriately worded National Environmental Standard ("NES") that addresses the needs of the fruit growing sector as foreshadowed in the National Party's Primary Sector Growth Plan provides an opportunity to eliminate the current misalignment, duplication and complexity of these existing requirements, while continuing to protect people and the environment. An NES would have the added advantage of significantly reducing the time and cost involved in submitting on the same activity multiple times through individual plan

² These metrics are for SunGold kiwifruit.

change processes. In our view, an NES would be game changing to the kiwifruit industry, and if this finds favour, we can provide a draft of what that might look like.

Freshwater Limit Setting:

In addition to the unnecessary complexity of the *current* regulations, growers are also facing challenges with proposed *new* regulations that have the potential to unnecessarily constrain orchard activities and hamper the growth of the industry. This is of concern, and is at odds with the government's target to double exports within the next ten years.

With the hydrogen cyanamide ("Hi-Cane") reassessment by the Environmental Protection Authority ("EPA") now complete, growers have identified the limit-setting process for freshwater as their next big challenge, with some going so far as to say that this is their next Hi-Cane. Growers are becoming increasingly unnerved by what they are seeing and hearing from regional councils; not only because of what the changes might mean to them personally, but also the potential ramifications for the communities that they operate in - some of whom are entirely reliant on the kiwifruit industry for its significant economic contributions and employment. While we understand the fundamental importance of water, and appreciate the need to maintain and improve it, in our view this needs to be done in a way that maintains an equitable and responsible balance between water, the wider environment and the community as envisaged by Te Mana o te Wai.

Kiwifruit Water Strategy and Te Mana o Te Wai

The kiwifruit industry has had a water strategy in place since 2019, the principles of which are aligned with Te Mana o te Wai.

The coalition agreement between the National and ACT Partys states that the National Policy Statement for Freshwater 2020 ("NPS-FM") will be replaced to rebalance Te Mana o te Wai to better reflect the interests of all water users. Our view, which is shared with and informed by Māori Kiwifruit Growers Incorporated (MKGI), is that Te Mana o te Wai as currently expressed in the NPS-FM does not require rebalancing, however the concept of Te Mana o te Wai has been poorly understood and applied to date, which has led to poor policy decisions.

In this document, we provide suggested amendments to the NPS-FM provisions to address this as well as case studies of growers who are applying Te Mana o Te Wai in practice. In our view Te Mana o te Wai should remain as a fundamental concept for the management of Freshwater in Aotearoa New Zealand.

Minimum Flow for Crop Survival:

While we understand the need for minimum flows to protect freshwater habitat, the availability of sufficient water to protect kiwifruit vines from the devastating effects of prolonged dry periods and frost, which we describe as "perennial horticultural crop survival water", is as imperative to our industry as animal drinking water is to the farming sector and must be provided for through regulation.

We make the point that while some kiwifruit is picked earlier, the fruit can remain on the vine through to June and it only takes one frost to ruin the crop, kill the vine, and/or damage it to the extent that it is no longer economically viable and replanting is necessary. While water for frost protection is usually required at times of the year when river flows are relatively high, this is not always the case.

It would be an absurd situation if growers risked enforcement action from Councils for taking water necessary to protect vines during adverse weather conditions.

Bay of Plenty Regional Council ("BOPRC") Minimum Flows:

The majority of kiwifruit orchards are located in the Bay of Plenty region. To date, BOPRC has not actively managed minimum flows, and the concept of having to scale back or cease

taking water to maintain minimum flow is new to growers. While BOPRC has provided options for the setting of new minimum flows, nobody yet understands which option will land, and what the new minimum flows will mean for growers on a catchment-by-catchment basis.

Across all of the regions, whatever the eventual minimum flows end up being, the industry will need time to understand how these new restrictions will impact growers and what adjustments will need to be made to the way growers operate, to comply with minimum flow requirements.

In the interim, and whatever eventual flow restrictions or requirements are put in place, perennial horticultural crop survival water must continue to remain available to existing growers across the country for this high value crop until such time as improvement actions such as water storage can be affordably implemented. The kiwifruit industry cannot be expected to adapt quickly if their vines are lost in the interim due to a lack of water.

Sensible Timeframes:

In the interim it will be important to ensure that the timeframes set to achieve water quality and quantity visions sensibly align with the timeframes required for resource users to adapt. We already have examples of growers working together on their own irrigation schemes where regional councils have indicated that their water takes will in the future need to be scaled back. These variously involve one global water take consent for several users, the sharing and rostering of water, and the sharing of costs to construct and automate the water storage system. The potential for resource users in individual catchments to work together to develop solutions should be encouraged.

We see the considerable potential for Freshwater Farm Plans to identify and manage risks to freshwater. In our view, established growers in catchments with degraded water quality should not require resource consents for their nutrient application and discharges if they have a compliant Freshwater Farm Plan.

Freshwater Farm Plans

We seek a number of changes to the provisions of Section 9A of the RMA in relation to Freshwater Farm Plan certification, to better align them with industry assurance programmes such as ZespriGAP.

In our view, Freshwater Farm Plans should be specifically referred to in the NPS-FM, given their valuable risk identification and mitigation role at the farm/orchard scale.

Claw-backs:

Some regional councils are signalling that, as a result of a review of the allocation status of waterways in their region, some rivers and aquifers in important kiwifruit growing areas are now over-allocated. The prospect of claw-back is of concern to growers, and it is important that adjustments to allocation status are transparent, supported by evidence and are equitable and priority based³. In our view, it would be unreasonable to claw back water where there are no or very limited environmental gains, but the costs and implications for water users are significant.

Support for Industry Growth:

To have any chance of the kiwifruit industry playing its part in doubling exports within ten years, growers right across the sector must have certainty that the water they need to reliably grow consistently high-quality fruit will be available. Without that certainty the necessary capital to grow the industry will not be invested. Right now, Māori kiwifruit growers are clear that the inability to access water is frustrating their plans for growth and

³ E.g. food production/export value, provisioning water to highly productive land.

compromising the potential for whānau communities to prosper from their own land. New orchards that would contribute to growth need a pathway for establishment.

Storage and Other Innovative Solutions:

There is scope in some catchments to better manage existing available water through improved efficiency, water rostering, consent transfers and community schemes, and some kiwifruit growers are already investigating those options with regional councils. However, growers are clear that in some areas, the only option to encourage growth while protecting the environment is to make more water available through water storage and harvesting, and innovative solutions such as aquifer recharge, in combination with reasonable requirements to maintain or improve water quality.

In our view, the freshwater policy should encourage the speedy uptake of storage and other innovative solutions to make more water available (both in terms of overall volumes and reliability of access) in those areas that require it. This could include an adaptive management “monitor as you go” approach that may include mātauranga Māori and other monitoring, rather than a precautionary, risk averse mindset that would see potential solutions fail, or take too long to implement. While adaptive management can and has been used in the context of the precautionary principle, councils have been unwilling to use it. That needs to change and wherever the resource management reform lands, this needs to be addressed.

Water Take Resource Consent Durations

In our view, water take resource consent durations for water takes should be a minimum of 15 to 20 years. Anything less than that is out of step with the significant investment that is required to establish a kiwifruit orchard⁴ and is at odds with the objective of increasing export growth, which requires growers to have certainty in relation to their water needs.

We understand the need for regional councils to be able to review the conditions of consent to ensure that water is being taken and used efficiently, and if necessary to adjust take volumes and rates. However, in our view, appropriately worded conditions and common catchment review dates are a more appropriate mechanism to achieve this than consents with short durations.

Policy Responsiveness:

It will also be important to ensure that the policy is nimble enough to readily adapt as future research, development and innovation provides affordable and workable solutions. The kiwifruit industry is actively researching the water and nutrient requirements of kiwifruit with the aim of reducing the industry’s environmental footprint while maintaining fruit quality and size, and fertiliser companies are working hard on solutions including the coating of fertiliser. As described later in this document, the construction of Baygold’s artificial treatment wetland is already resulting in considerable improvements in water quality, with more time needed to generate results over the longer term. There would be no greater disincentive for research and innovation than a policy regime that makes it too expensive and difficult for improvement actions to be implemented, recognised and rewarded.

We also make the point that the constantly changing national freshwater policy has provided no certainty for investment, and no better environmental outcomes than growers are progressing themselves. Our preference as an industry is to direct our time, money and effort into finding workable solutions rather than being required to make multiple submissions on policy, both to central and local government to protect the interests of the industry.

⁴ Orchard establishment costs vary depending on licence costs and the need for enclosed artificial shelter, but for SunGold can be up to \$1,000,000/ha.

Industry Performance:

We are confident that the kiwifruit industry is a low emissions land use, both in terms of its [carbon footprint](#) and in relation to water quality, and with time and additional research we will continue to improve both our productivity and our environmental performance. In our view, the Government would be hard pressed to find an industry that competes with kiwifruit in relation to its economic value, employment and low emissions. Growers are already implementing their own mitigation actions such as native planting in riparian areas, gullies and restoring wetlands.

Suggested Regulatory Amendments:

In the report to follow, we propose a number of amendments. Below is a summary of some of the key suggestions.

RM Bill 2:

- Amendments to Sections 6 and 7 of the Resource Management Act (1991) (“RMA”), to make primary production and the production of fruit and vegetables matters of national importance,
- Amendments to Section 14 of the RMA to provide for perennial horticultural crop survival water,
- Amendments to Part 9A of the RMA in relation to Freshwater Farm Plans, including the definitions of auditor and certifier and to better align Freshwater Farm Plans to Industry Assurance Programmes.

National Policy Statement for Freshwater Management (“NPS-FM”):

- Following consultation with Māori Kiwifruit Growers Incorporated, we suggest amendments to parts of the NPS-FM to clarify our understanding of the intent, and we provide examples of growers who are already practicing Te Mana o Te Wai on their own land,
- We suggest amendments to Appendix 1B of the NPS-FM with the purpose of ensuring that frost protection is a value that must be considered,
- We propose a new standard in the NES Freshwater for non-complying activity status for replacement kiwifruit water takes from existing water storage ponds that also meet the definition of a natural inland wetland, subject to conditions to protect the wetland values.

Proposed National Environmental Standard - Fruit (or kiwifruit)

- We provide an explanation of some of the issues and problems that growers are facing with different rules for the same activity across multiple regions and districts, e.g. orchard toilets, shelter provisions, agrichemical spraying, crop support structures, frost fans, accommodation, biosecurity and setbacks,
- We describe the significant reverse sensitivity issues that the industry is facing,
- We express our desire for an NES Fruit⁵ or NES Kiwifruit, and set out the benefits that an NES would bring to growers,

Proposal for a Staged Freshwater Planning Process

- We express our concerns around the freshwater planning process and in particular the capacity for industries who work across multiple regions to meaningfully consult

⁵ We understand that HortNZ is considering a National Environmental Standard (“NES”) for fruit and is working with the fruit product groups to gauge consensus on this approach.

with their members and prepare submissions given likely timeframes. In our view, a staged rollout of freshwater plans by regional councils, similar to the staged rollout of the requirements for freshwater farm plans, would assist with workload and provide better outcomes.

We welcome any opportunity to contribute further.

1. Introduction

1.1 Who We Are

New Zealand Kiwifruit Growers Incorporated (“NZKGI”) is an advocacy group that is mandated under the Commodity Levies Act 1990 to advocate on behalf of New Zealand kiwifruit growers. The NZKGI Forum, which has a governance role, has 17 regional representatives, 9 supply entity representatives and one Māori representative. The NZKGI Executive, which has a leadership role, is comprised of 6 Forum representatives all of whom are growers.

NZKGI’s mission is to advocate, protect and enhance the commercial and political interests of 2800+ New Zealand kiwifruit growers. The following three government initiatives have been identified as having direct relevance to our grower members:

- the ambitious target of doubling exports over the next ten years to help rebuild the economy,
- the aim of the Ministry of Regulation to improve and strengthen the regulatory management system, remove red tape, and minimise compliance costs, and,
- the phased process of Resource Management Reform; in particular the fast-track approvals bill, targeted changes to the RMA followed by its comprehensive reform and replacement, and the review and replacement of the National Policy Statement for Freshwater Management (“NPSFM”).

Given the relevance of these initiatives and the extent to which they overlap and interrelate, we appreciate the opportunity to offer suggestions that would significantly improve the regulatory regime for kiwifruit growers and therefore facilitate the growth of the industry.

In preparing this document, we have consulted extensively with our grower members, including Māori Kiwifruit Growers (“MKGI⁶”).

1.2 The New Zealand Kiwifruit Industry

The kiwifruit industry is New Zealand’s top horticultural export crop, being the fourth most valuable product behind dairy, meat and forestry. It contributes an average of \$4.3 billion per year in total expenditure, equivalent to \$2.18 billion in gross domestic product (“GDP”) to the New Zealand economy, providing a yearly average of 48,499 full-time equivalent jobs in New Zealand⁷. When compared to the dairy industry, kiwifruit as an intensive land use creates 40 times more jobs per hectare, 35 times food per hectare, and 15 times export earnings per hectare (and far greater again than sheep and beef).

⁶ MKGI is a lobby and advocacy group that was incorporated in 2017 to provide for active participation in the governance of the kiwifruit industry, to advocate for its members on policy reform and resource management. MKGI’s executive comprises 11 regional members based on production volumes and one member appointed as a representative on NZKGI. With 72 registered members covering 66 KPIN⁶s, MKGI provides a consolidated voice and representation on a number of issues. In saying that, MKGI believes in independence, autonomy and tino rangatiratanga. In this respect the voice of Māori growers and their boards is paramount and their voices Māori growers are encouraged to submit and speak independently on matters of importance to them.

⁷ BERL (2023) New Zealand kiwifruit industry’s contribution to well-being. New Zealand Kiwifruit Grower Incorporated.

Kiwifruit is a significant asset in Māori business portfolios with Māori owned kiwifruit orchards producing approximately 10% of New Zealand's total kiwifruit exports.

2. Potential Industry Growth and Effects of Regulation

The Government has set a target to double the value of New Zealand exports over the next ten years. If the Government can help the kiwifruit industry to overcome regulatory, supply chain and infrastructure constraints, it can sustainably grow from \$4b in sales in the last financial year to around \$8b over the decade.

The ability of the industry to grow depends upon many important factors including labour supply, sufficient and well-functioning infrastructure, along with robust research, development and innovation. It also relies on the ability of growers to access suitable land and water and protect and nurture their vines, while delivering on sustainability goals that are being demanded by an increasingly discerning market and maintaining its social licence.

The pace of change and complexity of the regulatory environment has become increasingly difficult for growers. While NZKGI understands the need for appropriate regulation to protect the environment and the communities that orchards operate in, we see considerable opportunity through resource management reform to improve regulatory processes, remove duplication, and ensure that the rules are simple and clear while minimising compliance costs for growers and achieving targeted outcomes. In our view, our recommendations are consistent with the aims of the Ministry for Regulation to strengthen the regulatory management system and remove red tape.

In addition, we know that regulatory uncertainty causes considerable stress to growers and is a significant disincentive to investment and growth. For example, during the recent hydrogen cyanamide⁸ ("HC") reassessment, some kiwifruit orchard sales fell through due to concerns around the prospect of a HC ban by potential purchasers, some packhouses put their plans to invest in automation and greater processing capacity on hold, and some in the industry found it difficult to access capital while the ban was on the table.

A ban or phase-out of HC would have resulted in an immediate reduction in orchard value. For existing growers, and new entrants in particular, who are funding development through debt within a high inflation and volatile economic environment, a ban would have resulted in many being in negative equity positions. With little financial resilience, not only would this reflect on their financial positions, but considerable stress would have been placed on their wellbeing. A substantial number of submitters to the HC hearing raised the issue of mental health impacts should a phase out or ban be implemented.

The release of the HC reassessment decision was welcome relief for growers. However, growers are now facing similar challenges in relation to water.

3. Water

With the HC reassessment now complete, growers are now turning their attention to potential challenges with water. While the detail is yet to emerge, some growers are very concerned about the communications that they are receiving from regional councils, with some growers referring to water as the 'new HC' issue.

We understand that some of those communications are driven by regional council requirements to give effect to the higher order legislation and policy such as the Resource

⁸ Hydrogen cyanamide is the active ingredient in a number of products including Hi-Cane that encourage flower growth and lead to greater yields of quality fruit which ripen at the same time.

Management Act 1991 (“RMA”) and the National Policy Statement for Freshwater Management (“NPS-FM”). Later in this document we suggest amendments to the RMA and NPS-FM that would provide considerable relief for growers, and give effect to Te Mana o te Wai by restoring and preserving the balance between the water, the wider environment and the community.

Prior to suggesting those amendments, we describe the kiwifruit industry water strategy, and provide an overview of the use of water and nutrients by growers in the sections below.

3.1 Kiwifruit Water Strategy

The kiwifruit industry⁹ has its own [water strategy](#), the purpose of which is to provide strong leadership and guidance to the kiwifruit industry on our contribution to the sustainable management of water, that protects the environment and enables industry growth objectives while maintaining economic viability for growers.

The Water Strategy was developed in 2019 and is one example of how the industry is proactive, both in terms of identifying and responding to key environmental issues and also listening to people both within our communities and in the market. Other similar examples include the way in which the industry has developed low spray drift technology for agrichemical spraying and the proactive way that the industry is responding to the challenges of climate change through its [Climate Change Strategy](#) and [Climate Change Adaptation Plan](#).

Research, innovation, extension to growers and self-regulation of the industry through NZKGI’s complaints hotline provides an important means of continuous improvement that is seen as vitally important to the industry’s future and to maintain the industry’s social licence.

The Water Strategy has a vision to collectively protect and enhance water resources for our people, our environment, and our communities while enabling kiwifruit industry growth along with specific goals. MKGI is one of the partners to the water strategy and as such, the water strategy is supported by key principles which provide a framework to help guide decision making. In our view, the key principles and what they mean when applied practically align with Te Mana o te Wai. We describe this further in Section 4.3.1.

3.2 Perennial Horticultural Crop Survival Water

The ability to access and use water is as important to kiwifruit growers as stock drinking water is to farmers. As a minimum, growers need to be able to access and apply water¹⁰ to keep their vines alive and viable during periods of low rainfall and to protect them from the devastating effects of frost. We refer to this as perennial horticultural crop survival water. It is important to understand that:

- the effects of frost can be devastating, resulting in the instant and overnight loss of the crop and/or death of the vines,
- during dry periods, if sufficient water is not applied, vines could either die immediately, or their ability to recover could be compromised to the extent that it would be better to remove and replace them,
- vines that need to be replaced take three years until they produce a crop; it is not simply a matter of resowing as for pasture,

⁹ NZKGI, Māori Kiwifruit Growers Incorporated (MKGI) and Zespri are all signatories to the Water Strategy.

¹⁰ Including freshwater and in some cases geothermal water where the temperature is greater than 30°C.

- kiwifruit is a high value crop that justifies protection.

While additional water is required to optimise the size and quality of the fruit, in our view the importance of ensuring the availability of perennial horticultural crop survival water is paramount. Growers need 100% reliability for horticultural crop survival water and in our view, this warrants some form of priority. This could be partially achieved through amendments to section 14(3)(b) of the RMA to place perennial horticultural crop survival water in the same category as animal drinking water. While the exception in section 14(3)(b) only applies if the taking/use of water does not or is not likely to have an adverse effect on the environment¹¹ which would limit its practical use when water is scarce, it would be very useful for growers for the purposes of frost protection for the majority of the year when river flows and groundwater levels are relatively high.

This proposed amendment would need to go hand in hand with national direction to regional councils to ensure that the setting of flows and levels is appropriately phased to provide the ability for existing growers to continue to access perennial horticultural crop survival water, at least in the interim until other solutions are found. The industry continues to fund research to better understand the water needs of kiwifruit vines and ways to improve water use efficiency, and as this research provides more knowledge, the results will be rolled out to growers with the aim of continuous improvement in relation to water use efficiency. In the interim, growers are working together to develop solutions within their own catchments, and this will continue, to achieve the vision of the kiwifruit industry water strategy. Ultimately the goal is to either use stored water, or to take surface water and groundwater while achieving the visions for the waterways as agreed by tangata whenua and communities.

Overall, we seek some form of national direction to ensure that perennial horticultural crop survival water will continue to be available for an interim period until alternative solutions are found, rather than debating the same issue repeatedly with multiple regional councils. While we have recommended some amendments to existing legislation, we note that there may be alternative mechanisms to achieve the same outcome e.g. a National Policy Statement (“NPS”) or NES. We make the point that a thriving kiwifruit industry will have more capacity to research, innovate and fund the necessary improvements over a shorter timeframe than an industry that would struggle financially due to a lack of water.

3.3 Potential Water Shortage Solutions

Our view is that there is considerable scope to better manage existing available water through improved efficiency, water rostering, consent transfers and community schemes, and some growers are already investigating and implementing these options. Regional councils should be required to have these conversations with water users on a catchment-by catchment basis, to see how far they can get with catchment specific improvements. These conversations need to be had, and sensible solutions adopted, before any regulatory changes that impact on growers take effect.

However, growers are clear that in some areas, while priority allocation over other users might be short term solution, in the longer term, the only option to encourage growth while protecting the environment is to make more water available to support kiwifruit growers through water harvesting and storage and innovative solutions such as aquifer recharge. Right now, Māori growers are clear that the inability to access water is frustrating their plans for growth, and compromising the potential for whānau communities to prosper from

¹¹ The question is what type of effect and how it would be measured, e.g. should it be tied to a S329 water shortage direction or would it override directions under S329? We understand that councils have turned their minds to the effects of takes under S14.

their own land. New orchards that would contribute to growth need a pathway for establishment.

In our view, freshwater policy needs to encourage the speedy uptake of innovative solutions to make more water available (both in terms of overall volumes and reliability of access) in those areas that require it. This could include an adaptive management “monitor as you go” approach that may include mātauranga Māori and other monitoring, rather than a precautionary, risk averse mindset that would see potential solutions fail, or take too long to implement. While adaptive management can and has been used in the context of the precautionary principle, councils have been unwilling to use it. That needs to change and wherever the resource management reform lands, this needs to be addressed.

Water storage includes both at the orchard level, where there is room and the soils/environment are suitable for pond construction, as well as larger water storage schemes. In our view, water storage should be encouraged and enabled through improved consenting pathways including permitted activity rules for small storage and fast tracking for larger storage options, and rates relief for growers who are able to construct storage on their land.

3.4 Water Take Resource Consent Durations

In our view, resource consent durations for water takes should be a minimum of 15 to 20 years. Anything less than that is out of step with the significant investment that is required to establish a kiwifruit orchard and is at odds with the objective of increasing export growth, which requires growers to have certainty in relation to their water needs.

We understand the need for regional councils to be able to review the conditions of consent to ensure that water is being taken and used efficiently, and if necessary to adjust take volumes and rates. However, in our view, appropriately worded conditions and common catchment review dates are a more appropriate mechanism to achieve this than consents with short durations.

3.5 Kiwifruit Nutrient Use and Discharges

Kiwifruit vines require nutrients to produce a healthy crop with good fruit size. Smart fertiliser use considers the “4Rs”:

- At the right rate,
- Of the right type,
- Delivered to the right place,
- At the right time.

It is important to note that the rate of application of nutrients is just one of many things to consider. We discuss this further later in this document in relation to limit setting.

Growers use soil tests to determine the right rate. Nutrients are applied through a variety of methods including direct application to the soil (synthetic fertiliser, compost, and/or fertigation) or directly to the vines through foliar fertilisers (right type).

Fertigation is applied to vines through an irrigation system. Depending on factors such as the age of the vines and likely location of the roots, growers may broadcast or band their synthetic fertiliser or compost, and foliar fertilisers are applied directly to the vines (right place).

Spring is the best time for plants to take up nutrients (right time). For best uptake and to limit the leaching and runoff of nutrients, fertiliser application is avoided ahead of or during heavy rain, or when soils are overly wet or waterlogged.

Regional councils have indicated the need for substantial reductions in all or some key contaminants including *E. coli*, suspended solids, nitrogen and phosphorus, in some surface water and aquifers in their regions. While *E. coli* is not an issue for the kiwifruit industry, earthworks associated with the development of new orchards can produce suspended solids and associated phosphorus, and nitrogen associated with nutrient application is the main contaminant of interest for established orchards.

The kiwifruit industry has a number of research projects underway to provide more information on the nutrient needs of kiwifruit, and how losses to the wider environment can be minimised and mitigated. To date, while it is acknowledged that grower practices vary, fertiliser records indicate that overall, growers are applying less nitrogen than they have in the past, and the research indicates that nitrogen loss from kiwifruit orchards is considerably less than other land uses. The industry is committed to continuing its research on nutrients and communicating the findings to growers.

In addition to reducing their nutrient application, many growers have already started implementing mitigation actions to improve water quality in their catchments including native riparian and gully planting, wetland restoration and in one case the construction of an artificial wetland. We provide examples in Attachment 1, noting that some of our kiwifruit growers are also pastoral farmers. In our view, rates relief for areas retired to native planting, along with carbon credit opportunities would serve to encourage growers who are putting considerable time, effort and funds into improving their land for the good of the wider catchment and as part of their climate change response.

4. Suggested Changes

4.1 Introduction

The government is making targeted changes to the RMA in the form of two bills. The Resource Management (Freshwater and Other Matters) Amendment Bill (also known as RM Bill 1) was introduced to Parliament on 23rd May 2024, and submissions closed on 30 June 2024. RM Bill 2 will be more substantive and is expected to be introduced into Parliament later in 2024.

In addition, the government has begun a programme of amending or developing new RMA national direction, with one of the purposes being to enhance the primary sector. This will include a review of the NPS-FM that is expected to take 18 to 24 months to complete. This will be followed by the comprehensive reform and replacement of the RMA.

While NZKGI will have the opportunity to respond to the proposed amendments individually via the formal submission processes, we offer our suggestions in advance, in the hope that they can be considered as the proposed policy changes are developed. In the sections to follow, we provide our suggested amendments in strike-out format, along with reasons.

We also note that the government has recently established the Ministry for Regulation, with the aim of strengthening the regulatory management system to improve its regulatory quality across New Zealand to ensure that all regulatory systems and agencies with regulatory responsibilities follow best practice. In our view, there is the potential to solve the current overly complex regulatory system for growers through the introduction of a National Environmental Standard. We explain this further in the sections to follow.

4.2 RM Bill 2

4.2.1 Section 2 - Interpretation

Suggested Addition

Add a new term as follows:

perennial horticultural crop survival water means water required to prevent the loss of perennial horticultural trees and vines that are grown for the purposes of human food consumption. It includes rootstock survival water and frost protection water.

rootstock survival water means the quantity of water that is required during times of insufficient rainfall to prevent the death or damage to the ongoing productivity of trees and vines, such that they would otherwise no longer be economically viable.

frost protection water means the quantity of water required during frost events to prevent the death or damage to the ongoing productivity of trees and vines, such that they would otherwise no longer be economically viable.

Reasons

As previously described, perennial horticultural crop survival water is as important to growers as stock drinking water is to farmers, and later in this document we propose changes to Section 14 of the RMA to afford perennial horticultural crop survival water the same protection. The suggested addition is to define and narrow the meaning of “perennial horticultural crop survival water” so that it only applies to perennial horticultural trees and vines that if lost, would take years to reestablish.

4.2.2 Sections 6 and 7 - Matters of national importance and other matters

Suggested Amendments

“6 Matters of national importance

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*
- (b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*
- (c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- (d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*
- (e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*
- (f) the protection of historic heritage from inappropriate subdivision, use, and development:*
- (g) the protection of protected customary rights:*
- (h) the management of significant risks from natural hazards*
- (i) the access to and ability to use natural and physical resources necessary for primary production.*

7 Other matters

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

- (a) *kaitiakitanga:*
- (aa) *the ethic of stewardship:*
- (b) *the efficient use and development of natural and physical resources:*
- (ba) *the efficiency of the end use of energy:*
- (c) *the maintenance and enhancement of amenity values:*
- (d) *intrinsic values of ecosystems:*
- (e) *[Repealed]*
- (f) *maintenance and enhancement of the quality of the environment:*
- (g) *any finite characteristics of natural and physical resources:*
- (h) *the protection of the habitat of trout and salmon:*
- (i) *the effects of climate change:*
- (j) *the benefits to be derived from the use and development of renewable energy:*
- (k) *the benefits to be derived from the production and supply of fresh fruit and vegetables.*

Reasons

In our view, the need for people to be able to source healthy and nutritious food should be recognised as matters of national importance through amendments to Sections 6 and 7 as suggested above. Fruit and vegetables in combination provide healthy and nutritious food for domestic and international customers with the latter generating significant export revenue. The ability to be able to access and use the physical resources needed for fruit and vegetable production ought to be recognised through the proposed changes.

Our observation is that while the protection of the habitat of trout and salmon and amenity values are recognised in Section 7 as matters of national importance, fresh fruit and vegetables that sustain human health are not. In our view, the protection of the habitat of trout and salmon and amenity values are “wants” whereas the fresh fruit and vegetables that sustain human health are “needs”, and a rethink of the matters that we now consider are of national importance is required.

The proposed changes to Sections 6 and 7 would ensure that the importance of accessing the resources necessary for fruit and vegetable production is recognised and provided for by regional and district councils at the highest level, and access to land and water subject to reasonable conditions is enabled through planning documents.

4.2.3 Section 14 - Restrictions Relating to Water

Suggested Amendments

“14 *Restrictions relating to water*

...

- (2) *No person may take, use, dam, or divert any of the following, unless the taking, using, damming, or diverting is allowed by subsection (3):*
 - (a) *water other than open coastal water; or*
 - (b) *heat or energy from water other than open coastal water; or*
 - (c) *heat or energy from the material surrounding geothermal water.*
- (3) *A person is not prohibited by subsection (2) from taking, using, damming, or diverting any water, heat or energy if -*

- (a) the taking, using, damming, or diverting is expressly allowed by a national environmental standard, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one), or a resource consent; or
 - (b) in the case of fresh water, the water, heat, or energy is required to be taken or used for -
 - (i) an individual's reasonable domestic needs; or
 - (ii) the reasonable needs of a person's animals for drinking water, ~~-or~~
 - (iii) the reasonable needs for perennial horticultural crop survival water
-
- and the taking or use does not, or is not likely to, have an adverse effect on the environment; or
- ...”

Reasons

As previously described, perennial horticultural crop survival water is as important to kiwifruit growers as stock drinking water is for farmers. For this reason, the two should be treated consistently though Section 14(3)(b). Note that “perennial horticultural crop survival water” has been defined in Section 4.2.1.

4.2.4 Part 9A Freshwater Farm Plans 217B Interpretation

Suggested Amendments:

Amend the definitions of “auditor” and “certifier” as follows:

auditor means a person who -

- a. is appointed under section 217K;
- b. is employed/contracted ~~or~~ by an approved industry organisation under Section 217KA; and
- ~~b.c.~~ meets the criteria prescribed in regulations made under section 217M(1)(h)

certifier means a person who -

- a. is appointed under section 217K;
- b. or by is employed/contracted by an approved industry organisation under Section 217KA; and
- ~~b.c.~~ meets the criteria prescribed in regulations made under section 217M(1)(h)

Add a new definition for ‘freshwater farm plan standard’ as follows:

freshwater farm plan standard means a set of publicly available specified requirements approved by a national body as equivalent to 217F(1)(a)-(e).

Reasons

The current definitions of “auditor” and “certifier” under Part 9A of the RMA are not aligned with international standards and create an inconsistent approach to assurance of freshwater farm plans. We seek amendments to the definitions of “certifier” and “auditor” to align with the approach taken under the ISO framework and for consistency with international practice. This approach is consistent with the ISO framework and would be more efficient for industry assurance programmes, such as ZespriGAP, which operate in a manner consistent with the ISO framework.

We seek that the content of a freshwater farm plan can be provided for through an approved “freshwater farm plan standard”. The standard will be required to demonstrate that it meets the purpose and content requirements of Part 9A of the RMA and is approved against criteria in the Ministerial Standard under Section 217KA of the RMA. The proposed amendment would recognise that there are multiple ways to achieve the aims of freshwater

farm plans, such as a benchmarked standard developed by industry that is tailored to horticulture and in our case, kiwifruit.

4.2.5 Part 9A Freshwater Farm Plans 217KA - Regional council may approve industry organisation to provide certification or audit services

Suggested amendments

217KA ~~Regional council may approve~~ Approval of industry organisation to provide certification and/or audit services

- (1) ~~The Ministry for the Environment or a regional council may give approval to an industry organisation, if operating nationally on behalf of its members, that applies to the council to provide certification and/or audit services under this Part if the council is satisfied that the organisation meets the standards issued under subsection (2).~~
- (2) The Minister may, by notice in the Gazette, issue standards by which industry organisations must be assessed for the purpose of determining their suitability to be an approved industry organisation.
- (3) Standards may also -
 - (a) set out the kind of organisation eligible to be approved for the purposes of this Part; and
 - (b) include content and processes to provide for compliance with the standards, for example, by requiring the industry to run training programmes and ensuring that conflicts are appropriately managed, and
 - (c) set nationally consistent reporting requirements.
- (4) A regional council may only request information from an approved industry organisation that is outlined in the standard as the council considers reasonably necessary for carrying out their functions under section 217I.

Reasons

Greater flexibility is needed in the way that industry organisations can be approved, such that organisations that operate nationally can apply for national recognition against Ministerial Standards, and regional councils must accept programmes that have been nationally approved.

4.3 National Policy Statement for Freshwater Management (“NPS-FM”)

We provide our suggested amendments to the NPS-FM in the sections below.

4.3.1 Te Mana o te Wai

Suggested Amendments

“1.3 Fundamental concept - Te Mana o te Wai

Concept

- (1) *Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.*
- (2) *Te Mana o te Wai is relevant to all freshwater management and not just to the specific aspects of freshwater management referred to in the National Policy Statement.*

Framework

- (3) *Te Mana o te Wai encompasses 6 principles relating to the roles of tangata whenua and other New Zealanders in the management of freshwater, and these principles inform this National Policy Statement and its implementation.*
- (4) *The 6 principles are:*
- (a) Mana whakahaere: the power, authority, and obligations of tangata whenua to make decisions that maintain, protect, and sustain the health and well-being of, and their relationship with, freshwater*
 - (b) Kaitiakitanga: the obligations of tangata whenua to preserve, restore, enhance, and sustainably use freshwater for the benefit of present and future generations*
 - (c) Manaakitanga: the process by which tangata whenua show respect, generosity, and care for freshwater now and into the future*
 - (d) Governance: the responsibility of those with authority for making decisions about freshwater to do so in a way that prioritises the health and well-being of freshwater now and into the future*
 - (e) Stewardship: the obligations of all New Zealanders to manage freshwater in a way that ensures it sustains present and future generations*
 - (f) Care and respect: the responsibility of all New Zealanders to care for freshwater in providing for the health of the nation.*
- (5) *There is a hierarchy of obligations in relation to both water quality and quantity in Te Mana o te Wai that prioritises:*
- (a) first, the health and well-being of water bodies and freshwater ecosystems*
 - (b) second, the health needs of people (such as drinking water, water for food production and supply, and sanitation)*
 - (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.*

The methods, rates and costs of achieving the hierarchy of obligations will vary by location, and require input from tangata whenua and the community.

2.1 Objective

- ~~(1) — The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way, and at a rate, that ensures that the identified - long-term visions for freshwater are achieved. prioritises:~~
- ~~(a) first, the health and well-being of water bodies and freshwater ecosystems~~
 - ~~(b) second, the health need of people (such as drinking water)~~
 - ~~(c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.~~

2.2 Policies

Policy 1: *Freshwater is managed in a way that gives effect to Te Mana o te Wai.*

Subpart 1 Approaches to implementing the National Policy Statement

3.2 Te Mana o te Wai

- (1) *Every regional council must engage with communities and tangata whenua to determine how Te Mana on te Wai applies to water bodies and freshwater ecosystems in the region.*
- (2) *Every regional council must give effect to Te Mana o te Wai, and in doing so must:*
 - (a) *actively involve tangata whenua in freshwater management (including decision-making processes), as required by clause 3.4; and*
 - (b) *engage with communities and tangata whenua to identify long-term visions, environmental outcomes, and other elements of the NOF; and*
 - (c) *apply the hierarchy of obligations, as set out in clause 1.3(5):*
 - (i) *when developing long-term visions under clause 3.3; and*
 - (ii) *when implementing the NOF under subpart 2; and*
 - (iii) *when developing objectives, policies, methods, and criteria for any purpose under subpart 3 relating to natural inland wetlands, rivers, fish passage, primary contact sites, and water allocation; and*
 - (d) *enable the application of a diversity of systems of values and knowledge, such as mātauranga Māori, to the management of freshwater; and*
 - (e) *adopt an integrated approach, ki uta ki tai, to the management of freshwater (see clause 3.5).*
- (3) *Every regional council must include an objective in its regional policy statement that describes how the management of freshwater in the region will give effect to Te Mana o te Wai.*
- (4) *In addition to subclauses (1) to (3), Te Mana o te Wai must inform the interpretation of:*
 - (a) *This National Policy Statement; and*
 - (b) *The provisions required by this National Policy Statement to be included in regional policy statements and regional and district plans.*

3.3 Tangata whenua involvement

- (1) *Every local authority must actively involve tangata whenua (to the extent that they wish to be involved) in freshwater management (including decision-making processes), including in all of the following:*
 - (a) *identifying the local approach to giving effect to Te Mana o te Wai,*
 - (b) *making or changing regional policy statements and regional and district plans so far as they relate to freshwater management*
 - (c) *implementing the NOF (see subclause (2))*
 - (d) *developing and implementing mātauranga Māori and other monitoring.*
- (2) *In particular, and without limiting subclause (1), for the purpose of implementing the NOF, every regional council must work collaboratively with, and enable, tangata whenua to:*
 - (a) *identify any Māori freshwater values (in addition to mahinga kai) that apply to an FMU or part of an FMU in the region; and*

- (b) *be actively involved (to the extent they wish to be involved) in decision-making processes relating to Māori freshwater values at each subsequent step of the NOF process.*
 - (3) *Every regional council must work with tangata whenua to investigate the use of mechanisms available under the Act, to involve tangata whenua in freshwater management, such as:*
 - (a) *transfers or delegations of power under section 33 of the Act*
 - (b) *joint management agreements under section 36B of the Act*
 - (c) *mana whakahono a rohe (iwi participation arrangements) under subpart 2 of Part 5 of the Act.*
 - (4) *To avoid doubt, nothing in this National Policy Statement permits or requires a local authority to act in a manner that is, or make decisions that are, inconsistent with any relevant iwi participation legislation or any directions or visions under that legislation.*
- 3.5 *Integrated Management*
- (1) *Adopting an integrated approach, ki uta ki tai, as required by Te Mana o te Wai, requires that local authorities must:*
 - (a) *recognise the interconnectedness of the whole environment, from the mountains and lakes, down the river to hāpua (lagoons), wahapū (estuaries) and to the sea; and*
 - (b) *recognise interactions between freshwater, land, water bodies, ecosystems, and receiving environments; and*
 - (c) *manage freshwater, and land use and development, in catchments in an integrated and sustainable way to avoid, remedy, or mitigate adverse effects, including cumulative effects, on the health and well-being of water bodies, freshwater ecosystems, and receiving environments; and*
 - (d) *encourage the co-ordination and sequencing of regional and urban growth...*

Reasons

One of the stated government objectives of RM Bill 2 is to rebalance Te Mana o te Wai in the interests of all water users. In our view Te Mana o te Wai does not need rebalancing. The issue is that Te Mana o te Wai has been applied incorrectly which has led to poor policy decisions.

As previously discussed, the kiwifruit industry has a [water strategy](#), with MKGI being one of the signatories. The water strategy contains a number of principles as reproduced below:

OUR PRINCIPLES

At the heart of our work are five key principles. These provide a framework for our decision-making as partners, as we work towards doing what we say we will do.



He taonga te wai ***Water is a treasure***

- Water is precious and valuable
- Water has spiritual, environmental, physical and economic value
- Water is a resource to use, preserve and replenish
- Water is life.



Oranga nuku, Oranga rangi ***Prosperity from the earth and sky***

- We gain prosperity, well-being and health from the earth and sky
- Water is a resource to grow food and for all people to benefit from
- We are stakeholders, investors and beneficiaries of the kiwifruit industry for today and in the future.



Ko tātou katoa ngā kaitiaki ***We are all guardians and caretakers***

- We take collective and personal responsibility to care for water resources
- We are accountable to future generations so they benefit from water resources like we do
- We will lift our knowledge of caring for and using water better.



Te amokura rangatira ***The mark of leadership***

- We are taking a leadership position together
- We will act proactively with our people and groups we interact with
- We are calling people to take a lead in their communities.



Titiro ki te paetawhiti ***Look to the horizon and beyond***

- We seek solutions for now and into the future
- We look beyond our own backyard to find solutions and problems that may impact on our water usage
- We will find solutions based on evidence and research for better water quality and efficiency.

The principles acknowledge that water is precious and valuable, that water is life, that we are accountable to future generations, and that we will seek solutions based on evidence and research for better water quality and efficiency. They also acknowledge that water has spiritual, environmental, physical and economic value, and that water is a resource to use,

preserve and replenish and for people to benefit from. In our view, the principles of the kiwifruit water strategy are well aligned with the concept of Te Mana o Te Wai.

Appendix 1 contains examples of kiwifruit growers who are achieving the concept of Te Mana o Te Wai by improving waterways through native planting e.g. riparian areas and gullies, wetland restoration, and in one case through the construction of an artificial wetland. These actions are being undertaken at the same time as water is being used by growers to provide for the social, economic and cultural wellbeing of people and communities.

In our view, the Te Mana o te Wai hierarchy has been misinterpreted, mostly because its intent is unclear. Our suggested amendments make it clear that the hierarchy applies to both water quality and water quantity.

It should also be acknowledged that achieving the Te Mana o te Wai hierarchy in our more degraded waterways may, by necessity, be aspirational, given the costs and time involved to improve those waterways. The values, methods, rates and costs of achieving the hierarchy of obligations across individual waterways will vary by location and will require input from tangata whenua and the community to achieve good outcomes.

In the interim however, as demonstrated by the case studies in Attachment 1, people are already implementing their own improvement measures and perhaps without even knowing it, those actions are enabling Te Mana o Te Wai. It is important that these initiatives are encouraged. Rates relief for retired land may be one way of doing so.

In our view, the second tier of the Te Mana o te Wai hierarchy should acknowledge that water is a resource that allows food to be grown for all people to benefit from and that water for sanitation is important to maintain health. We have suggested amendments accordingly.

We are also of the view that the Te Mana o te Wai hierarchy has been wrongly applied as the objective of the NPS-FM. Te Mana o te Wai recognises the fundamental importance of water. From a practical perspective it recognises that some waterways need to be maintained and others must be improved, but in doing so the rate of change needs to consider the balance between the water, the environment and the community. This balance can only be achieved through sensible conversations in relation to the visions and values at freshwater management unit (FMU) scale. Our suggested amendments to the objective reflect that.

4.3.2 Best information

Suggested Amendments

1.6 Best information

- (1) *In giving effect to this National Policy Statement, local authorities must use the best information available at the time, which means, ~~if practicable~~, using complete and scientifically robust data where available.*
- (2) *In the absence of complete and scientifically robust data, the best information may include information obtained from modelling, as well as partial data, local knowledge, and information from other sources, but in this case local authorities must:*
 - (a) *prefer sources of information that provide the greatest level of certainty, and*

- (b) take all practicable steps to reduce uncertainty (such as through improvements to monitoring, ~~or the~~ validation of the models used, sensitivity analysis and/or independent peer review).
- (3) A local authority:
- (a) Must ~~not delay~~ make ~~ing~~ decisions ~~solely because of uncertainty about the~~ commensurate with the quality or quantity of the information available; ~~and~~
- (b) If the information is uncertain, must interpret it in the way that will best give effect to this National Policy Statement, and
- (c) Have a process in place to ensure that limits and action plans can be amended without the need for a plan change in the event that scientifically robust data becomes available in the future.

Reasons

Some regional councils have very limited flow and water quality monitoring data and are relying on models to better understand the current state of waterways in their regions, and to set limits and prepare action plans. Given the potential ramifications for water users and other stakeholders, it is important that there is confidence in the models and full knowledge of their level of accuracy. This can be achieved through improvements to the monitoring, model validation, sensitivity analysis and peer review.

We have some concerns that in the absence of complete and scientifically robust data, regional councils will have no choice but to be overly conservative in relation to limit setting. In our view, there needs to be a process in place that encourages regional councils to continue to improve the accuracy of their models, and to easily make adjustments to their water allocation and nutrient limits where justified by new information and emerging science, without the need for a fully notified plan change.

Section 3.14 of the NPS-FM states that limits on resource use may apply to individual properties. From a practical perspective, this has the potential to reduce, for example, the quantity of nutrients that a grower can apply. As previously discussed, the kiwifruit industry is continuing to research new and better ways of managing water and nutrient use and discharges. There would be no greater disincentive to funding research, innovation and extension to growers than a cumbersome and expensive process that makes it too difficult to implement improvements that will likely be possible as new science emerges.

4.3.3 Subpart 2 National Objectives Framework (NOF)

Suggested Amendments

3.11 Setting target attribute states

...

- “(4) If the baseline state of an attribute is below any national bottom line for that attribute, the target attribute state must be set at or above the national bottom line (see clauses 3.31 and 3.32 and 3.32 A for exceptions to this).

3.32A Achievement of Visions

(1) If achieving a national bottom line for an attribute in a degraded waterway would have disproportionate adverse economic, social effects or cultural effects, the Regional Council may set a baseline state of an attribute above the national bottom line provided the visions are met, as evidenced by science and mātauranga Māori.”

Reasons

We understand that target attribute states must be set at the national bottom line (or better) and that regional councils/communities have the ability to set a realistic long timeframe for that to be achieved in a degraded FMU, but there may be examples where the visions can be achieved without meeting national bottom lines. For example, scientific and/or matauranga Māori/cultural monitoring may indicate that aquatic life in a previously degraded waterway has returned and is abundant and healthy and the costs to further improve it to achieve a national bottom line are not justified and any necessary funding would be better spent elsewhere. The proposed addition of 3.32A provides a mechanism for regional councils, communities and Māori to make their own decisions in such circumstances based on priorities.

4.3.4 Setting limits on resource use

Suggested Amendments

- (1) *Limits on resource use may:*
 - (a) *apply to any activity or land use; and*
 - (b) *apply at any scale (such as to all or any part of an FMU, or to a specific water body or individual property); and*
 - (c) *be expressed as any of the following:*
 - (i) *a land-use control (such as a control on the extent of an activity, or the requirement for a compliant freshwater farm plan)*
 - (ii) *an input control (such as an amount of fertiliser that may be applied)*
 - (iii) *an output control (such as a volume or rate of discharge); and*
 - (d) *describe the circumstances in which the limit applies.*
- (2) *In setting limits on resource use, every regional council must:*
 - (a) *have regard to the following:*
 - (i) *the long-term vision set under clause 3.3*
 - (ii) *the foreseeable impacts of climate change; and*
 - (b) *take into account results or information from freshwater accounting systems.*

Reasons

The NPS-FM currently makes no mention of the requirement for Freshwater Farm Plans in Part 9A of the RMA (1991). In our view, an input control, such as an amount of fertiliser that may be applied, or an output control, such as a volume or rate of discharge is too blunt and does not consider the four Rs of nutrient application (right rate, type, place and time). Similarly input and output controls do not consider property-specific risks e.g. topography, proximity to waterways, type and intensity of land use. These matters are more appropriately considered in a Freshwater Farm Plan.

4.3.5 Water allocation

Suggested Amendments

3.28 Water allocation

- (1) Every regional council must make or change its regional plan to include criteria for:
- (a) deciding applications to approve transfers of water take permits; ~~and~~
 - (b) deciding how to improve and maximise the efficient allocation of water (which includes economic, technical, and dynamic efficiency), ~~and~~ -
 - (c) deciding whether existing and new municipal water takes have incorporated practicable measures to achieve a reduction in take volumes during times of reduced flows and water levels.
- (2) Every regional council must include methods in its regional plan to encourage the efficient use of water.

Reasons

In July 2024 the Government announced decisions requiring councils to free up more land for housing. These changes will be implemented through amendments to the Resource Management Act and the National Policy Statement on Urban Development, with the requirements expected to be in place by mid-2025.

We do not disagree that more land needs to be freed up for housing, but our concern is that more water will be required to service this housing, which may cause allocation issues for growers. In our view, more could be done to maximise the efficiency of allocation for municipal supply, including for example, water metering, and the collection of roof runoff water and/or grey water for the watering of gardens and lawns in dry periods. This should be encouraged through regional plan rules.

4.3.6 Appendix 1B - Other values that must be considered

Proposed Amendments

8 Irrigation, frost protection, cultivation, and production of food and beverages

The FMU or part of the FMU meets irrigation and frost protection needs for any purpose.

Water quality and quantity is suitable for irrigation and frost protection needs, including supporting the cultivation of food crops, the production of food from farmed animals, non-food crops such as fibre and timber, pasture, sports fields, and recreational areas. Attributes will need to be specific to irrigation, frost protection and food production requirements.

Reasons

As previously described, the consequences of frost can be devastating for growers. While frost fans and windmills are an option for some orchards, they are not always practical, particularly where their noise would disturb neighbours. As previously described, the provision of perennial horticultural crop survival water to protect vines from the devastating effects of a prolonged drought and frost is an industry imperative for the kiwifruit industry, given its high value and the three-year delay prior to production in the event that replanting is required. For this reason, our view is that the importance of frost protection water should be recognised as a value to be considered in the NPS-FM.

Our observation is that the inclusion of sports fields and recreational areas seems an odd fit given that the focus of the value appears to be the production of food and beverages.

5. Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (“NES-F”)

5.1 Drainage of natural inland wetlands

Proposed Amendments

“52 Non-complying activities

- (1) *Earthworks outside, but within a 100m setback from, a natural inland wetland is a non-complying activity if it -*
 - (a) *results, or is likely to result, in the complete or partial drainage of all or part of a natural inland wetland; and*
 - (b) *does not have another status under any of regulations 38 to 51.*
- (2) *The taking, use, damming, or diversion of water outside, but within a 100m setback from, a natural inland wetland is a non-complying activity if it -*
 - (a) *results, or is likely to result, in the complete or partial drainage of all or part of a natural inland wetland; and*
 - (b) *does not have another status under any of regulations 38 to 51.*
- (3) *The taking of water from a pond that was lawfully established prior to 3rd August 2020, that is also a natural inland wetland is a non-complying activity if it -*
 - (a) *is for the purpose of horticultural irrigation and frost protection, and is a replacement for an existing resource consent; and,*
 - (b) *does not exceed the quantity and rate of take authorised by the original resource consent; and,*
 - (c) *results, or is likely to result, in the partial drainage of all or part of a natural inland wetland; and*
 - (b) *does not have another status under any of regulations 38 to 51.*

Reasons

We are aware of examples where previous seepage areas were lawfully enlarged in the past to create water storage ponds for growers. Some regional councils are reviewing aerial imagery and determining that the ponds meet the definition of “natural inland wetlands”, and a resource consent to take water cannot be granted due to 53 (2) which prohibits the activity. Growers therefore have to find an alternative source of water which can be difficult if they are located in areas where there is overallocation.

In our view, there should be an opportunity for a replacement resource consent to be granted for water takes from existing ponds that were lawfully established prior to the incorporation of the new definition for “natural inland wetland” into the NES-F. The proposed addition of (3) is to provide opportunities for growers to keep taking from their ponds, if wetland values can be protected through appropriate resource consent conditions, for example, the setting of a minimum water level, conditions relating to pump intake velocity and screen size, and fish passage as appropriate.

We note that regional councils treat this matter differently and in our view there is confusion regarding the intent. Our preference would be for MfE to redraft the wetland rules so that they are clearer, without the need for the current guidance document.

6. Our Proposal for a New National Environmental Standard (“NES”)

In our view an NES Fruit (or alternatively kiwifruit) would simplify a currently complex and costly regulatory system, cut red tape and provide certainty for all while protecting communities and the environment that we operate in. We understand that HortNZ is considering a National Environmental Standard (“NES”) for fruit and is working with the fruit product groups to gauge consensus on this approach.

As previously described, growers with orchards in different regions and districts must comply with different rules for the same activity as required by multiple district and regional plans. The same applies for contractors who work in multiple districts, e.g. constructing artificial shelter, and regions e.g. agrichemical spraying contractors and auditors. From a resource management perspective, while water is currently top of mind for growers with agrichemicals not far behind, it is the combination of all of the orchard-based activities, e.g. orchard toilets, shelter, crop support structures, frost fans, workforce accommodation, audible bird scaring devices, drilling for water and requirements for pump testing, that ranks next in importance and many of the issues that growers are facing could be resolved with an NES.

For agrichemical spraying, the situation is even more complicated because the label controls for individual agrichemicals imposed by the Environmental Protection Authority (EPA) can differ from the regional plan permitted activity rules for all sprays. The end result is a complicated regulatory framework, that is inefficient and problematic for growers. We provide examples of these difficulties below.

6.1 Example 1 - Inconsistencies across districts

District councils across New Zealand have different rules for the same activities, including natural and artificial shelter, audible bird scarers, frost fans, the drilling of water bores and associated pump tests (noting potential water take and use issues where aquifers cross regional authority boundaries), and the construction of worker accommodation. Growers and contractors who currently work in multiple districts find these different rules challenging.

In addition, growers are looking to move into new districts that have suitable land and infrastructure, an available water supply, an amenable climate and access to labour. In some districts, the shift in rural land utilisation from pastoral use to kiwifruit was not foreseen when the district plan was prepared, and as a result the rules can be confusing and difficult. While this can be rectified through plan change processes, due to the costs involved, growers are generally reliant on council-initiated plan change processes which rely on the council to propose the plan change. In the meantime, growers need to either wait for the plan change process to be initiated and to run its course, or alternatively apply for resource consents which can be costly with no guarantee of a favourable outcome.

In our view, an NES offers considerable potential to improve the regulatory system by providing consistent rules for the same activity across the districts where kiwifruit is grown. An NES would provide immediate relief for existing growers, as well as having the potential to ease the way for growers who are looking to establish in new districts.

6.2 Example 2 - Inconsistencies across regions

Agrichemical spraying is regulated by several different agencies including regional councils and the EPA. Regional council air plans contain permitted activity rules for airblast spraying¹², subject to conditions with the aim of avoiding or mitigating potential adverse effects outside of the orchard boundary.

¹² Also known as ground-based spraying.

Regional plans have different standards for their permitted activity rules for agrichemical spraying. Attachment 2 provides examples of differences in the definition of sensitive areas and in relation to compliance with New Zealand Standard, Management of Agrichemicals (NZS 8409:2004). Regional plans also differ in relation to notification requirements and understanding and complying with these varying requirements is challenging for growers, contractors and auditors working across different regions.

To complicate matters even further, while the regional plans variously require compliance with New Zealand Standard, Management of Agrichemicals (NZS 8409:2004), the standard was updated in 2021 to include new rules, for example around notification and signage, competency and training. Appendix F of the new Standard has been substantially rewritten to reflect new requirements for competency and training set out in the EPA Hazardous Property Controls Notice, and spray contractors holding a Growsafe Registered Chemical Applicator Certificate are required to demonstrate compliance with part or all of the Standard. While the intention is that regional plans will be updated to embed the requirements of the revised standard, the current need to comply with both versions of the New Zealand standard, and the differing requirements across the regions, is extremely confusing for growers and spraying contractors, especially those who work across multiple regions.

In our view, this complexity could be largely overcome if an NES contained a permitted activity rule for agrichemical spraying with a simplified set of conditions, generally as follows:

“The spraying of agrichemicals that:

- *complies with the controls specified on individual agrichemical labels and the requirements of Safety Data Sheets,*
- *avoids adverse effects of spray drift beyond the boundary of the subject property, and,*
- *complies with the mandatory sections of New Zealand Standard, Management of Agrichemicals (NZS 8409:2021) - (noting that the 2021 standard will likely require review to ensure that it is fit for purpose)*

is a permitted activity.”

We also make the point that reverse sensitivity issues are becoming more problematic for growers due to the encroachment of urban and lifestyle properties into the rural zone. One grower based near Te Puna now needs to notify 175 different neighbours prior to each spray event.

Section 3.13 of the National Policy Statement for Highly Productive Land (“NPS-HPL”) is helpful in relation to managing reverse sensitivity and cumulative effects, but in our opinion, it could go further by requiring no complaints covenants where subdivisions will result in dwellings being located close to kiwifruit orchards. While we are encouraging growers who are subdividing their own land to consider a [no complaints covenant](#), we see potential in extending this further, possibly through an NES or amendment of the NPS-HPL.

6.3 Inconsistency between regional rules and label requirements

The EPA imposes controls through the labels and safety data sheets for individual agrichemicals, and some of these controls have the same goal as the regional council rules in terms of avoiding or mitigating adverse effects on bystanders and the environment. This creates a complex and administratively difficult regulatory environment for growers.

By way of example, Attachment 2 summarises some of the regional agrichemical airblast spraying rules and compares them with the label requirements for Hi-Cane. The table identifies a number of inconsistencies e.g.:

- The maximum windspeed control for Hi-Cane (label requirement) is 20 km/h whereas the regional rules in Tairāwhiti and Tasman set a maximum windspeed of 15 km/h,
- The definition of a sensitive spray area varies across regions, and is inconsistent with the HC label requirements,
- The buffer zone rules are inconsistent across regions and difficult to understand, and are also inconsistent with the HC label requirements, especially in Northland,
- The definition of “Effective Shelter” in the Northland Regional Plan is very different to the definition of “Effective Shelter” as stated on the Hi-Cane label.

The situation becomes even more complicated given that a number of different agrichemicals are used in the kiwifruit industry in addition to Hi-Cane.

6.4 What an NES May Contain

Our preliminary view is that an NES has the potential to create a consistent rule framework across districts and regions for the following activities:

- agrichemical spraying,
- biosecurity responses,
- natural and artificial shelter and crop support structures,
- audible bird scaring devices,
- frost fans,
- worker accommodation,
- orchard toilets,
- well drilling and pump testing,
- and possibly perennial horticultural crop survival water.

We would welcome the opportunity to discuss this further, and if agreed in principle could provide a draft of what an NES may include, together with case studies that demonstrate the types of problems that growers are experiencing.

7. Our Proposal for a Staged Rollout of Regional Freshwater Plans

Cabinet has given councils an extra three years (until December 2027) to notify their freshwater farm plans while work continues on the review and replacement of the NPS-FM. While some councils intend to notify their freshwater plans early, e.g. BOPRC intends to notify in September 2025, most councils are waiting for the NPS-FM to be replaced first. The review and replacement of the NPS-FM is expected to take 18 to 24 months to complete and might be expected to land between July and December 2025. For this reason, we foresee a large workload reviewing freshwater plans towards the end of 2026 and 2027.

For industries working across multiple regions such as the kiwifruit industry, the prospect of the huge workload during that time is daunting. NZKGI needs time to understand the implications for growers, to consult with them and prepare submissions. The freshwater planning process contains very limited appeal rights and where regional councils do not provide a draft plan for comment, there will be a lot of information to read, digest, and consult with growers on within a very limited timeframe, and essentially one chance to get it right.

We favour a staged rollout of regional Freshwater Plans similar to the staged rollout of Freshwater Farm Plans. In our view, a staged rollout would provide a fairer way for industries who work across multiple regions to meaningfully participate in the process.

Attachment 1: Case Studies

Case Study 1: Baygold Station Orchard - Pukehina

At Baygold's 'Station Orchard' on the publicly visible corner of State Highway 2 and Maniatutu Road near Pukehina in the Bay of Plenty, 'Stage 1' of a 2.5 ha constructed wetland has been built with the support of Bay of Plenty Regional Council and [NIWA](#).

Baygold had previously worked with Bay of Plenty Regional Council on native planting projects covering 16ha which included gully plantings and the restoration of ecological corridors, but the opportunity arose to work with others, including NIWA on the much larger wetland project.

The existing wetland was started in February 2022 and consists of four interconnected filtration ponds and 41,000 plants. Funding support was provided by BoPRC, Ministry for the Environment, and the Ministry for Primary Industries One Billion Trees Programme. Baygold contributed upwards of \$300,000 to the project. Local iwi Ngāti Pikiao supported the project and have undertaken monitoring at no charge. The wetland was professionally designed by NIWA.

BayGold is now in the process of turning the 1.6ha strip of land alongside State Highway 2, directly below the company's kiwifruit orchard, into wetland (Figure 1).



Figure 1: Baygold artificial treatment wetland

This wetland treats water from the wider 73 ha catchment of kiwifruit and dairy use - which feeds the Kaikokopu stream and then the Waihi estuary (Figure 2). The estuary itself is a significant site and highly valued by the community and Māori, but is suffering from significant water quality issues due to land use pressures. The draft BOPRC Freshwater Management Unit ("FMU") story for the Waihi estuary indicates that substantial change will be required within this FMU to reduce the four key contaminants; in the order of 70% for

nitrogen, 30% for phosphorus, 25-50% for *E. coli*, and 20% to 65% for suspended sediment, all of which are significant changes.

[Wai Kōkopu](#) is a community-led programme to replenish and revitalise the health of the Waihi Estuary. Wai Kōkopu's vision is to restore the mauri (life giving properties of the Waihi Estuary) and their mission is to working together for the next 20 years to restore and replenish the Waihi Estuary, Pongakawa, Kaikōpoku, and Wharere Rivers and surrounding lands, contributing waters and associated biodiversity.



Figure 2: Location of Baygold Wetland and Little Waihi Estuary

The 'Stage 1' treatment wetland has already drawn much positive attention from locals and the wider community and helped contribute toward Baygold receiving the "2023 Bay of Plenty Region Supreme Winner" award at the Ballance farm environment awards. The

development of the 'Stage 1' treatment wetland is the result of a great working partnership between Baygold, local iwi, BOPRC, Ministry for the Environment and NIWA. Most importantly, the treatment performance of the wetland is being monitored with the data for the initial 6 months showing the following reductions in contaminant concentrations being achieved:

- Nitrate nitrogen 91%,
- Ammonium nitrogen 78%,
- Total nitrogen 50%,
- Dissolved reactive phosphorus 93%,
- Total phosphorus 75%, and
- *E. coli* 81%.

These early results in Baygold's Station Orchard may stabilise and reduce over time as the wetland matures, but the reduction in contaminants, and biodiversity gains achieved so far are promising and suggest a pathway that may be viable for other growers to follow.

As well as improving water quality, one of the goals was to boost biodiversity and enhance aesthetic and cultural values. Pond margins and riparian surrounds include a mixture of sedges, flaxes, shrubs and trees. Invertebrates in the wetland provide an excellent food source for birds, frogs and fish. Kōura (freshwater crayfish) and tuna (eels) would be expected to benefit from the habitat and food sources available in the wetland. Significant increases in native wildlife have been observed due to the newly formed pond and reed habitat. Scientists have even sighted the rare New Zealand dabchick (weweia), which is a type of grebe that is a threatened species listed as nationally vulnerable, with a population estimated at 1900-2000. With its small population and sparse distribution, the numbers of dabchick are likely to continue to decline and the potential exists to sustain the population of the dabchick through similar future wetland projects.

While these wetlands are expensive to construct, the biodiversity gains achieved offer the potential to attract investor funding in the future through a biodiversity credit system or some other mechanism. In addition, multiple industries across the world and in New Zealand are trialling alternative mitigation and water treatment options both on a small scale e.g. water treatment reactors and on a larger scale, and it is important that new, affordable technology can be adopted when available.

Case Study 2: Bruntwood Farms Waterway and Indigenous Planting - Plummers Point.

Over the course of the last eight years, Bruntwood Farms have removed approximately 6 ha of gorse, woolly nightshade and blackberry and replanted the area in native plantings in the Plummers Point Road area, near the Tauranga Harbour.

Work commenced by mulching with a digger, letting the weeds regrow, spraying them out, covering the mulched area with wood chips for weed suppression and planting in the months of August and September. The property has a stream that runs into large ponds that discharge to the Tauranga Harbour (Figure 2). Bruntwood Farms intend to initiate water quality monitoring next year.



Figure 3: Stream and Ponds Discharging to the Tauranga Harbour

Bruntwood Farms have so far invested approximately \$300,000 into the projects.

Case Study 3: Pukekauri Farm - Katikati

The Burke Family, Pukekauri Farms recently won a [Cawthron 2024 Freshwater Champions Award](#) for individual/family actions improving the health of their 300ha sheep and beef farm. The Burke family have proven that enhancing the environment is possible without jeopardising profit.

The Burkes have owned and managed Pukekauri Farms since the early 1980s. Twenty years ago, they found they had some major environmental issues. Runoff from the farm was contributing to sediment pollution in the Tauranga Harbour as well as harming freshwater habitats. The only drinking access for stock was from waterways and the regional council had rated stream health as 2/10.

Several decades on, along with a farm environment plan and much hard work under their belts, their efforts have vastly improved their freshwater and biodiversity outcomes. The Burkes have fenced waterways, developed eight wetlands, reticulated stock water and reduced grazing area by about 25% by retiring farmland into native forest. Their stream health rating is now rated at 9/10. Their work has inspired the formation of other local catchment groups where they play a hands-on role, and also shows the potential that Freshwater Farms Plans to help direct and guide others at the start of their journey towards sustainability.

Attachment 2: Regional Plan Agrichemical Spraying Rules

Yellow highlights inconsistencies in the rules between regions and the Hi-Cane label.

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition¹³						
Hi-Cane Label Requirements	A person applying this substance must ensure that the substance is not applied when wind speeds are more than 20 km/h as measured at the application plot or when there is an air temperature inversion layer. <i>Explanatory note: In winter, an air temperature inversion occurs when cold air close t the ground is trapped by a layer of warmer air. Temperature inversions occur when there is little, or no wind and the sky is clear. Under these conditions, in the evening and during the night, heat from the ground is radiated into the atmosphere, and the air adjacent to the ground cools relative to the layer above. This creates stagnant air near the ground, which traps particulate matter such as smoke, pollution, or sprayed substances.</i>	Bystander buffer zones <table><tr><td>Use pattern description</td><td>Downwind buffer zone</td></tr><tr><td>Kiwifruit≤25 kg ai/ha – Air Blast</td><td>6m (with shelter)</td></tr><tr><td>Kiwifruit ≤25 ai/ha – Air Blast</td><td>8m (without shelter)</td></tr></table>	Use pattern description	Downwind buffer zone	Kiwifruit≤25 kg ai/ha – Air Blast	6m (with shelter)	Kiwifruit ≤25 ai/ha – Air Blast	8m (without shelter)	A person applying this substance must ensure that the substance is only applied via ground-based methods using nozzles and appropriate mixtures of hydrogen cyanamide, water, and/or adjuvants that will produce a coarse or larger droplet size as defined, for example, in ISO 25358:2018 Crop protection equipment, droplet-size spectra from atomizers.	Refer buffer zones column. Sensitive areas are defined as bystanders, aquatic environment buffer zones, and non target plants. Note the multiple differences in the definition of sensitive areas below.
		Use pattern description	Downwind buffer zone							
		Kiwifruit≤25 kg ai/ha – Air Blast	6m (with shelter)							
		Kiwifruit ≤25 ai/ha – Air Blast	8m (without shelter)							
Aquatic environment buffer zones <table><tr><td>Use pattern description</td><td>Waterbody downwind buffer zone</td><td>Waterbody run-off buffer zone</td></tr><tr><td rowspan="2">Kiwifruit ≤25 ai/ha – Air Blast</td><td>6m (with shelter)</td><td rowspan="2"><5% sloped: 10m 5-10% slope: 15m >10% slope:20m</td></tr><tr><td>10m (without shelter)</td></tr></table>	Use pattern description	Waterbody downwind buffer zone	Waterbody run-off buffer zone	Kiwifruit ≤25 ai/ha – Air Blast	6m (with shelter)	<5% sloped: 10m 5-10% slope: 15m >10% slope:20m	10m (without shelter)			
Use pattern description	Waterbody downwind buffer zone	Waterbody run-off buffer zone								
Kiwifruit ≤25 ai/ha – Air Blast	6m (with shelter)	<5% sloped: 10m 5-10% slope: 15m >10% slope:20m								
	10m (without shelter)									
Non-target plant downwind buffer zones <table><tr><td>Use pattern description</td><td>Downwind buffer zone – non-threatened species</td><td>Downwind buffer zone – threatened species</td></tr><tr><td rowspan="2">Kiwifruit ≤25 ai/ha – Air Blast</td><td>6m (with shelter)</td><td rowspan="2">15m</td></tr><tr><td>10m (without shelter)</td></tr></table>	Use pattern description	Downwind buffer zone – non-threatened species	Downwind buffer zone – threatened species	Kiwifruit ≤25 ai/ha – Air Blast	6m (with shelter)	15m	10m (without shelter)			
Use pattern description	Downwind buffer zone – non-threatened species	Downwind buffer zone – threatened species								
Kiwifruit ≤25 ai/ha – Air Blast	6m (with shelter)	15m								
	10m (without shelter)									
Explanatory note – effective shelter: “Effective shelter is defined as planted trees artificial materials situated at the boundaries of an application plot, that have been shown to form a barrier that can reduce spray drift by 80%.”										
Northland Regional Plan prp Page 175	In addition to the requirements for spray-sensitive areas in Table 2 below, C.6.5.1 2) d) states that agrichemical application must not occur if: i. Wind speeds are greater than 6 m/s plus gusts; or ii. Wind speeds are between 0-1 m/s and inversion conditions are present or likely to be present during application. C6.5.1 requires spraying to be undertaken in accordance with a number of sections of New Zealand Standard, Management	C6.5.1 requires spraying to be undertaken in accordance with a number of sections of New Zealand Standard, Management of Agrichemicals (NZS 8409:2004 ¹⁵) – detailed under the “Spray Quality” column in this table. In addition to the sensitive areas defined in Table 2 below, NZS 8409:2004 Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be	C6.5.1 states that the discharge of an agrichemical into air or onto or into land is a permitted activity, provided: 2) for ground-based spraying and aerial spraying: a) the activity is undertaken in accordance with the following sections of the New Zealand Standard, Management of Agrichemicals (NZS 8409:2004) as it relates to the management of the discharge of agrichemicals: i. Use – Part 5.3, and ii. Storage – Appendix L4, and iii. Disposal – Appendix 5, and iv. Records – Appendix C9, and... Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q) Table G1 in	Part B of the Proposed Regional Plan contains the definitions. “Spray-sensitive area” is defined as: 1) Residential buildings and associated garden areas, and 2) schools, hospital buildings and care facilities and grounds, and 3) amenity areas where people congregate including parks and reserves, and 4) community buildings and grounds, including places of worship and marae, and 5) certified organic farms, and 6) orchards, crops and commercial growing areas, and 7) water bodies used for the supply of drinking water and for stock drinking, and 8) natural wetlands and significant areas of indigenous vegetation and habitats of indigenous						

¹³ NZS8409:2004 has a section on Sensitive Areas in Appendix G, G4. While examples of sensitive areas are provided, the document states that a check should be made with the regional authority because there may be sensitive areas specified in the regional plan.

¹⁵ Section 1.2.1 of NZS8409:2004 states that for the purposes of the standard, “shall” refers to practices that are mandatory for compliance with the Standard. The word “should” refers to practices that are advised or recommended. All of the regional plans referred to in the table (except Tasman) refer to NZS8409:2004 in some respect.

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition¹³
	<p>of Agrichemicals (NZS 8409:2004¹⁴) – detailed under the “Spray Quality” column in this table. Section 5.3.4.1 of NZS 8409:2004 states that no agrichemical application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target effects to people or property (it refers to Appendix G – Spray Drift Hazard and Weather Conditions). Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by:</p> <p>(a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to move any spray drift away from sensitive areas thereby minimizing any drift hazard;</p> <p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p> <p>...</p>	<p>regarded as just that – guidelines, and that spray droplet drift models can be used to give more detailed information for specific situations.</p>	<p>Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled “Application Equipment for Plant Protection Products”. It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively).</p>	<p>fauna as defined in the Regional Policy Statement for Northland, and</p> <p>9) roofing for the collection of drinking water; and</p> <p>10) apiaries.</p>
<p>Proposed Plan Change 13 (Air Quality) to the Bay of Plenty Regional Natural Resources Plan</p> <p>regional-air-plan page 12</p>	<p>AIR-AGR-R18 (5) has an advice note stating that users (particularly large-scale) should also comply with the New Zealand Standard Management of Agrichemicals NZS 8409:2004. NZS 8409:2004 Section 5.3.4.1 states that no agrichemical</p>	<p>No specific reference to buffer zones but AIR-AGR-R18 (5) requires a Spray Risk Management Plan to be prepared and implemented. (5) (b) (iii) requires the Spray Drift Management Plan to include strategies to avoid contamination of sensitive areas and public roads including consideration of the Draft Hazard Guidance Chart contained within Table G1 of NZS 8409:2004. Table G1 makes mention of buffer zones but as a guideline only.</p>	<p>AIR-AGR-R18 (5) has an advice note stating that users (particularly large-scale) should also comply with the New Zealand Standard Management of Agrichemicals NZS 8409:2004. Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q). Table G1 in</p>	<p>Sensitive area means an activity that is particularly sensitive to adverse effects associated with air contaminant discharges either due to the vulnerability of the population or area exposed to the contaminant, or due to the potential for people to be exposed for prolonged periods and may include:</p> <p>(a) residential buildings and areas (including marae)</p>

¹⁴ Section 1.2.1 of NZS8409:2004 states that for the purposes of the standard, “shall” refers to practices that are mandatory for compliance with the Standard. The word “should” refers to practices that are advised or recommended. All of the regional plans referred to in the table (except Tasman) refer to NZS8409:2004 in some respect.

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	<p>application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target effects to people or property (refer to Appendix G). Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by:</p> <p>(a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to move any spray drift away from sensitive areas thereby minimizing any drift hazard;</p> <p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p> <p>...</p>	<p>AIR-AGR-R18 (5) has an advice note stating that users (particularly large-scale) should also comply with the New Zealand Standard Management of Agrichemicals NZS 8409:2004.</p> <p>NZS 8409:2004 Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be regarded as just that – guidelines, and that spray droplet drift models can be used to give more detailed information for specific situations.</p>	<p>Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled “Application Equipment for Plant Protection Products”. It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively).</p>	<p>(b) childcare centres, schools, educational facilities</p> <p>(c) hospitals, nursing homes, aged care facilities</p> <p>(d) offices, consulting rooms, gymnasiums, community centres</p> <p>(e) hotels, motels, caravan parks, camping areas, tourist accommodation</p> <p>(f) correctional facilities</p> <p>(g) public amenity areas</p> <p>(h) manufacturing or storage of food or beverages</p> <p>(i) manufacturing or storage of electronics</p> <p>(j) public water supply catchments and intakes.</p> <p>(k) incompatible crops or farming systems (e.g. organic farms, greenhouses)</p> <p>(l) household water supplies (including roofs from which a water supply is obtained).</p> <p>Public amenity area means a public area where members of the public are likely to congregate for extended periods of time. This may include (but is not limited to): backcountry huts, barbecues, changing facilities, cycleways, outdoor sports facilities, parks and reserves, playgrounds and playground equipment, public toilets, seating and picnic tables, shelters, squares, and walkways. (Note the reference to public roads in the column headed “buffer zones”).</p>
<p>Tairāwhiti Resource Management Plan TRMP-Part-C1-C4 Page 31</p>	<p>Rule 1.5.4(14) contains standard c) which states that the application of agrichemicals shall not occur in winds greater than 15 km/hr over the target area. Standard d) states that the agrichemical shall be used in a manner complying with NZS 8409:2004 Management of Agrichemicals.</p> <p>NZS 8409:2004 Section 5.3.4.1 states that no agrichemical application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target</p>	<p>No specific reference on buffer zones but Rule 1.5.4(14) standard d) states that the agrichemicals shall be used in a manner complying with NZS8409:2004 Management of Agrichemicals. Section 5.3.4.4 of NZS 8409:2004 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be regarded as just that – guidelines, and that spray droplet drift models can be used to give more detailed information for specific situations.</p>	<p>Rule 1.5.4(14) standard d) states that the agrichemical shall be used in a manner complying with NZS8409:2004 Management of Agrichemicals. Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q.) Table G1 in Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled “Application Equipment for Plant Protection Products”. It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively).</p>	<p>The Definitions section of the Tairāwhiti Resource Management Plan states the following:</p> <p>Sensitive Area</p> <p>Receiving environments in the Gisborne district that are more sensitive to the discharge of contaminants to air than others. These have been identified as being:</p> <p>a) Residences and places of public and private assembly (including amenity areas) where the discharge may result in a reduction in amenity values or adversely affect human health;</p> <p>b) Public roads and airports where the discharge may result in a reduction in visibility or otherwise jeopardise the safe and efficient use of this infrastructure;</p> <p>c) Domestic and community water supplies where the discharge may result in adverse effects on human health;</p>

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	<p>effects to people or property (refer to Appendix G). Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by:</p> <p>(a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to move any spray drift away from sensitive areas thereby minimizing any drift hazard;</p> <p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p> <p>...</p>			<p>d) Wetlands, lakes and rivers and their margins where the discharge may result in a reduction of the life supporting capacity of water or cause damage to aquatic ecosystems or a loss of natural character;</p> <p>e) Sensitive crops or farming systems where the discharge may result in damage to crops or animals or jeopardise the ability for people to provide for their economic well-being;</p> <p>f) Significant indigenous vegetation and significant habitats of indigenous fauna as defined in C9 of the Tairāwhiti Plan, including areas containing threatened species where the discharge may result in damage to these indigenous species or habitats;</p> <p>g) The coastal environment, in particular within 200m landward of mean high water springs where the discharge may result in a loss of natural character;</p> <p>h) Sites of special significance to tangata whenua, as identified in the Part Operative Gisborne District Combined Regional Land and District Plan.</p> <p>Also note these General standards:</p> <p>K. Any discharge of agrichemicals shall not occur directly above a permanently flowing river, lake, wetland or other surface water body, including any drain or any opening to a drain or any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation or farm drainage canals) that is discharging to a surface water body, unless the chemical is registered for use over water bodies.</p> <p>L. The discharge shall not result in the deposition of noxious or dangerous levels of agrichemicals or hazardous contaminants onto water bodies specifically managed for public water supply purposes, unless the discharge is a chemical registered for use over water bodies.</p> <p>M. The discharge shall not result in the deposition of any agrichemical onto any roof or other structure used as a collection for water supply or onto any residential or school vegetable garden that could reasonably be expected to cause any significant adverse effect.</p>
<p>Auckland Unitary Council AucklandUnitaryPlan</p>	<p>E34.6.1.2 (14) states : <i>“Agrichemicals must only be applied when the wind direction is away from the sensitive area as outlined in Standard E34.6.1.2(9)(a)-(i).”</i></p> <p>E34.6.1.2 (1)(a) states that the application of agrichemicals for non-domestic uses must comply with a number of sections of New Zealand Standard – Management of Agrichemicals (NZS 8409:2004), including Safe Use of Agrichemical Compounds and Plant Protection Products in Section 5.3. Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast</p>	<p>No specific reference to buffer zones in the Plan but E34.6.1.2 (1)(a) states that the application of agrichemicals for non-domestic uses must comply with a number of sections of New Zealand Standard – Management of Agrichemicals (NZS 8409:2004), including Safe Use of Agrichemical Compounds and Plant Protection Products in Section 5.3. Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast</p>	<p>E34.6.1.2 (1)(a) states that the application of agrichemicals for non-domestic uses must comply with a number of sections of New Zealand Standard – Management of Agrichemicals (NZS 8409:2004), including Safe Use of Agrichemical Compounds and Plant Protection Products in Section 5.3. Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q) Table G1 in Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled “Application Equipment for Plant Protection</p>	<p>E34.6.1.2(9) states: <i>“In addition to the requirements for all applications, where the discharge will occur adjacent to sensitive areas identified in the spray plan then Standards E34.6.1.2(10) to E34.6.1.2(16) must also be undertaken. Sensitive areas include all of the following:</i></p> <p><i>(a) dwellings;</i></p> <p><i>(b) education facilities;</i></p> <p><i>(c) marae and papakāinga;</i></p> <p><i>(d) hospitals and aged-care facilities</i></p> <p><i>(e) amenity areas and public places;</i></p> <p><i>(f) sources of potable water including roof water collection;</i></p>

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	<p>and Plant Protection Products in Section 5.3. NZS 8409:2004 Section 5.3.4.1 states that no agrichemical application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target effects to people or property (refer to Appendix G). Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by:</p> <p>(a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to move any spray drift away from sensitive areas thereby minimizing any drift hazard;</p> <p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p> <p>...</p>	<p>sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be regarded as just that – guidelines, and that spray droplet drift models can be used to give more detailed information for specific situations.</p>	<p>Products”. It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively).</p>	<p>(g) <i>non-target crops, flora and fauna (such as bees) sensitive to agrichemicals and vertebrate toxic agents;</i></p> <p>(h) <i>certified organic farms and farms applying for certification; and</i></p> <p>(i) <i>freshwater systems, the coastal marine area and significant ecological areas as identified in the Significant Ecological Areas Overlay.</i></p> <p>Note: it appears that “amenity areas and public places” are those defined by NZS 8409:2004). Note that the General standards in E34.6.1.1 are also relevant, particularly:</p> <p>(4) The discharge is not directly into water, including the coastal marine area or a freshwater body, unless the chemical is approved by the Environmental Protection Authority for use over or into water bodies.</p> <p>(5) The discharge is not directly onto or into water used for a potable water supply including roofs used for water collection.</p>
<p>Waikato Regional Plan waikatoregion Chapter 6.2</p>	<p>Rule 6.2.4.9 requires that the application of agrichemicals shall be undertaken in accordance with New Zealand Standard 8409:2004, Management of Agrichemicals. NZS 8409:2004 Section 5.3.4.1 states that no agrichemical application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target effects to people or property (refer to Appendix G).</p>	<p>Rule 6.2.4.9 requires that the application of agrichemicals shall be undertaken in accordance with New Zealand Standard 8409:2004, Management of Agrichemicals. Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be regarded as just that – guidelines, and that</p>	<p>Rule 6.2.4.9 requires that the application of agrichemicals shall be undertaken in accordance with New Zealand Standard 8409:2004, Management of Agrichemicals. Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q) Table G1 in Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled “Application Equipment for Plant Protection Products”. It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively).</p>	<p>Policy 2 states: Recognise that some areas, places or features are sensitive to the adverse effects of off target exposure to agrichemicals, including, but not limited to:</p> <ol style="list-style-type: none"> dwelling-houses places of public assembly* and public amenity areas* domestic and community water supplies water bodies⁶⁹ and the banks of a water body habitats of significant indigenous flora and fauna (as defined in district plans and Department of Conservation Management Strategies)

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	<p>Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by:</p> <p>(a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to move any spray drift away from sensitive areas thereby minimizing any drift hazard;</p> <p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p> <p>...</p>	<p>spray droplet drift models can be used to give more detailed information for specific situations.</p>		<p>f. plants and/or crops which are sensitive to agrichemical(s) being discharged</p> <p>g. certified organically farmed properties⁷⁰.</p> <p>69. As defined in the RMA.</p> <p>70. Such as Biogro.</p> <p>*Place of public assembly: Land or buildings including schools, that are used in whole or part for the assembly or gathering of people for such purposes as meeting, conferences, worship, entertainment, recreation, celebration, education or similar purposes and includes buildings associated with public or private hotels, traveller' accommodation and marae.</p> <p>*Public amenity areas: Those areas to which the public have right of access under any statute, regulation, law or by-law, which may include:</p> <ol style="list-style-type: none"> 1. Crown or council properties, reserves, gardens, parks and airfields; 2. Grasslands, sports grounds and recreational turf; 3. Forest and bush areas; 4. Road and rail verges and embankments, pedestrian walkways, malls and precincts; 5. Beaches and beach reserves and adjacent foreshore areas.
<p>Horizons Regional Council</p> <p>chapter-15</p> <p>Page 128</p> <p>C:\Users\Kathy.mas on\Documents\Hydrogen Cyanamide\Regional Council Rules\horizons.regional-plan</p>	<p>Rule 6.2.4.9 requires that the application of agrichemicals shall be undertaken in accordance with New Zealand Standard 8409:2004, Management of Agrichemicals. NZS 8409:2004 Section 5.3.4.1 states that no agrichemical application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target effects to people or property (refer to Appendix G).</p> <p>Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by:</p> <p>(a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to</p>	<p>Rule 6.2.4.9 requires that the application of agrichemicals shall be undertaken in accordance with New Zealand Standard 8409:2004, Management of Agrichemicals. Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelterbelts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be regarded as just that – guidelines, and that spray droplet drift models can be used to give more detailed information for specific situations.</p>	<p>Rule 6.2.4.9 requires that the application of agrichemicals shall be undertaken in accordance with New Zealand Standard 8409:2004, Management of Agrichemicals. Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q) Table G1 in Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled "Application Equipment for Plant Protection Products". It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively).</p>	<p>Refers to Policy 15-1.</p> <p>Sensitive areas include, but are not limited to:</p> <ol style="list-style-type: none"> i. residential buildings, ii. public places and amenity areas where people congregate, iii. education facilities, iv. public roads*, v. surface water bodies^, vi. wāhi tapu*, marae and other sites* of significance to hapū* and iwi*, vii. domestic, commercial and public water supply* catchments and intakes, viii. rare habitats*, threatened habitats* and at-risk habitats*, and ix. sensitive crops or farming systems (including certified organically farmed properties* and greenhouses). <p>b. the matters in Policy 14-9.</p> <p>Public road means any formed legal road^ that has open public access. It includes both the road area normally used by motor vehicles and cyclists along</p>

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	<p>move any spray drift away from sensitive areas thereby minimizing any drift hazard;</p> <p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p> <p>...</p>			<p>with adjacent footpaths and any berms and verges not in private ownership</p> <p>Wāhi tapu means a site* sacred to Māori in the traditional, spiritual, religious, ritual, or mythological sense and includes rua kōiwi*</p> <p>Hapū means a social, political unit comprised of whānau* each recognising descent from a common ancestor</p> <p>Iwi means a political grouping comprised of several hapū*, each recognising descent from a common ancestor(s). The hapū* not only recognise genealogical ties but geographical, political and social ties. Today iwi* are represented by many organisations, including trust boards, rūnanga and iwi authorities^, but only in specific areas where the mandate to do so has been given by the constituent hapū*.</p> <p>Public water supply means a reticulated publicly or privately owned drinking water^ supply connecting at least two buildings and serving at least 1,500 person days per year (eg., 25 people for at least 60 days per year). Drinking water^ is water^ intended to be used for human consumption, food preparation, utensil washing, oral hygiene or personal hygiene.</p> <p>Rare habitat means an area determined to be a rare habitat in accordance with Schedule F and, for the avoidance of doubt, excludes any area in Table F.2(b)</p> <p>Threatened habitat means an area determined to be a threatened habitat in accordance with Schedule F and, for the avoidance of doubt, excludes any area in Table F.2(b).</p> <p>At-risk habitat means an area determined to be an at-risk habitat in accordance with Schedule F and, for the avoidance of doubt, excludes any area in Table F.2(b).</p> <p>Note that there doesn't appear to be a definition for "certified organically farmed properties*"</p> <p>Definitions provided in the RMA are not repeated in the 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.</p>
Hawke's Bay Regional Resource Management Plan	Rule 10 includes an advisory note that refers to Table Y1 from NZS 8409:2004 (the reference to	Rule 10 includes an advisory note that refers to Table Y1 from NZS 8409:2004 (the reference to Table Y1 appears to be an error – it should be Table G1-Drift hazard guidance chart). The advisory note	Rule 10 includes an advisory note that refers to Table Y1 from NZS 8409:2004 (the reference to Table Y1 appears to be an error – it should be Table G1-Drift hazard guidance	"Sensitive Area" is not defined. The assumption is that the user is expected to use the sensitive areas defined in NZS 8409:2004.

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
New-Chapter-6 Page 128	<p>Table Y1 appears to be an error – it should be Table G1-Drift hazard guidance chart). The advisory note includes a table that summarises some of the key information contained within Table G1 including guidance on windspeed and direction.</p> <p>Rule 10, Standard b requires that the discharge shall be undertaken in accordance with all mandatory requirements set out in Sections 2, 5 and 8 of the New Zealand Standard for the Management of Agrichemicals (NZS 8409:2004).</p> <p>NZS 8409:2004 Section 5.3.4.1 states that no agrichemical application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target effects to people or property (refer to Appendix G).</p> <p>Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by:</p> <p>(a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to move any spray drift away from sensitive areas thereby minimizing any drift hazard;</p> <p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p>	<p>includes a table that summarises some of the key information contained within Table G1 including guidance on buffer zones.</p> <p>Rule 10, Standard b requires that the discharge shall be undertaken in accordance with all mandatory requirements set out in Sections 2, 5 and 8 of the New Zealand Standard for the Management of Agrichemicals (NZS 8409:2004). Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be regarded as just that – guidelines, and that spray droplet drift models can be used to give more detailed information for specific situations.</p>	<p>chart). The advisory note includes a table that summarises some of the key information contained within Table G1 including guidance on droplet size.</p> <p>Rule 10, Standard b requires that the discharge shall be undertaken in accordance with all mandatory requirements set out in Sections 2, 5 and 8 of the New Zealand Standard for the Management of Agrichemicals (NZS 8409:2004). Management of Agrichemicals. Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q) Table G1 in Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled “Application Equipment for Plant Protection Products”. It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively).</p>	<p>One of the conditions is that “The discharge shall not result in any agrichemical being deposited on any roof or other structure used as a catchment for water supply other than in compliance with (f).”</p> <p><i>f. Where the discharge is onto land or onto water for the purpose of eradicating, modifying or controlling unwanted aquatic plants:</i></p>

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	...			
Tasman tasman	<p>Rule 36.6.2.1: (g) The discharge must be undertaken in such a way that pesticide drift does not move over any adjoining property that is any: (i) school, or early childhood education facility, or their grounds; or (ii) place of public assembly, including any public reserve, sports field or children's playground; or (iii) property registered or certified by the New Zealand Biological Producers & Consumers Society Incorporated or the Biodynamic Farming and Garden Association as an organically farmed property, provided that this registration or certification was established before any discharge activity is commenced; or (iv) dwelling or any area within 30 metres of a dwelling, provided that this does not apply where there is a mutual agreement to this effect between the person who discharges or causes the discharge of any pesticide, and any occupier of the dwelling.</p> <p>...</p> <p>(h) When the wind conditions are such that pesticide may drift onto any adjoining property that is not listed in condition (g): (i) the person who discharges or who causes the discharge to be undertaken must: (a) hold the Growsafe Standard Certificate; and (b) ensure that there is no discharge when wind speeds are more than 15 kilometres per hour; and (c) during any period of discharge, place a sign or signs on any road adjacent to the site of the discharge to indicate to road users that pesticide may be discharged adjacent to the road; and (ii) the person who discharges or who causes the discharge to be</p>	Note the reference to (g) (iv) in the column to the left.	There appears to be no reference to NZS 8409:2004 or spray quality in this plan.	<p>Note the reference to (g) in the 2nd column of this table. Also note: Rule 36.6.2.1 states: The discharge of pesticides to land, water or air is a permitted activity that may be undertaken without resource consent, if it complies with the following conditions: Location of the Discharge (b) The pesticide is not discharged onto any land open for lawful public access, including any road, public park or reserve, except: (i) where an owner or occupier of any property adjoining the land discharges or causes the discharge to be undertaken by hand-held method onto any of the land at any point adjacent to the boundary with the property; or (ii) for the hand placement or spraying of pesticides using a hand-held, non-motorised knapsack sprayer or weed wiper. (c) The pesticide is not: (i) discharged onto the bed of any river or lake, or into the coastal marine area; or (ii) discharged onto or into a water body or coastal water; or (iii) applied in such a way as to form run-off or drift into a water body or coastal water; unless the product label specifically states that the application can be made directly into or onto fresh water or coastal water. (d) The pesticide is not discharged onto an urban or community water supply catchment area, or any roof, or other water collection structure.</p>

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	undertaken must ensure that there is no discharge of pesticide from any point less than 30 metres from that property boundary; or (iii) the owner or occupier of the property where the discharge is to take place must ensure that there is a spray belt along the boundary of every adjoining property onto which pesticide drift may move; except where other pesticide drift management arrangements have been mutually agreed between the owner or occupier of the property where the discharge is to take place, or the person who discharges or who causes the discharge, and the owner or occupier of any adjoining property.			
Nelson nelson088.pdf	AQr: 56 The discharge of agrichemicals to air or land is permitted if after 1 December 2005: ... c) other than for small-scale application, it complies with the mandatory requirements of NZS8409:2004 Management of Agrichemicals. NZS 8409:2004 Section 5.3.4.1 states that no agrichemical application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target effects to people or property (refer to Appendix G). Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by: (a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to move any spray drift away from sensitive areas thereby minimizing any drift hazard;	AQr: 56 The discharge of agrichemicals to air or land is permitted if after 1 December 2005: ... c) other than for small-scale application, it complies with the mandatory requirements of NZS8409:2004 Management of Agrichemicals. Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be regarded as just that – guidelines, and that spray droplet drift models can be used to give more detailed information for specific situations.	AQr: 56 The discharge of agrichemicals to air or land is permitted if after 1 December 2005: ... c) other than for small-scale application, it complies with the mandatory requirements of NZS8409:2004 Management of Agrichemicals. Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q) Table G1 in Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled “Application Equipment for Plant Protection Products”. It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively). Appendix AQ7 of the Regional Plan states: Drift Control h) The applicator must take all reasonable care to avoid and mitigate any spray drift hazard as specified in Section 5.3.4 of NZS 8409:2004 Management of Agrichemicals. Appendix G ‘Spray Drift Hazard and Weather Conditions’ of the Standard contains detailed information regarding drift control. Advisory Note: The requirements set out in this Appendix are in addition to the requirements set out in NZS 8409:2004 ‘Management of Agrichemicals’. Compliance with the mandatory parts of the Standard is required by Rule AQr.56. The mandatory parts of the standard are those that include the word ‘shall’. The Standard also contains	Appendix AQ7 discharge to agrichemicals to land or air: standards, terms and conditions states: <i>e) The discharge must be undertaken in such a way that agrichemical drift does not move over any adjoining property that is any: i) School, or early childhood education facility, or their grounds, or ii) Place of public assembly including any public reserve, sports field or children’s playground, or iii) Property registered or certified by the Biological Producers and Consumers Council or the Biodynamic Farming and Garden Association as an organically farmed property, provided that this registration or certification was established before any discharge activity is commenced, or iv) Residential unit or any area within 30 metres of a residential unit, provided that this does not apply where there is a mutual agreement to this effect between the person who discharges or causes the discharge of any agrichemicals, and any occupier of the residential unit, or v) Property growing a sensitive crop, and ...</i>

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	<p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p> <p>...</p>		<p>informative guidance material which will greatly reduce the risk of any environmental or health and safety incidents when using agrichemicals.</p>	
<p>Taranaki Regional Air Plan AirPlan</p>	<p>Appendix 7 has a good practice spray guide that says - <i>Should not spray if the wind speed over the area to be sprayed is less than one metre per second (3 kilometres per hour) and droplet size is less than 50 micron, or greater than six metres per second (15 kilometres per hour). "The discharge shall be undertaken in accordance with all mandatory requirements set out in Sections 2, 5 and 6 and relevant appendices of the New Zealand Standard for Management of Agrichemicals (NZS 8409:2004)."</i></p> <p>NZS 8409:2004 Section 5.3.4.1 states that no agrichemical application should be made unless wind speed and wind direction at the application site are known and are not expected to create adverse off-target effects to people or property (refer to Appendix G). Section 5.3.4.2 states that applicators shall be aware of the ways in which off-target movement of spray can occur, and take all reasonable care to avoid or mitigate the hazard by:</p> <p>(a) Spraying in a cross-wind, where the direction and strength of the airflow is predictable and is expected to move any spray drift away from</p>	<p>Appendix 7 has a good practice spray guide with a table with minimum buffer zones but notes the table is a guide only. Rule 56 c) states <i>"The discharge shall be undertaken in accordance with all mandatory requirements set out in Sections 2, 5 and 6 and relevant appendices of the New Zealand Standard for Management of Agrichemicals (NZS 8409:2004)."</i></p> <p>Section 5.3.4.4 states that where appropriate, buffer zones shall be used to minimise spray drift hazard to sensitive areas. However, applicators shall not rely exclusively on buffer zones or shelterbelts to eliminate spray drift hazard. Guidance on the use of buffer zones and shelterbelts is set out in Appendix G. Section G6 discusses buffer zones and shelter belts and provides buffer zone guidelines and suggested minimum distances between the downwind edge of the target area and the sensitive area (with and without shelter) for guidance. For air blast sprayers the buffer zone distance with shelter is 10m and for without shelter is 30m, however Section G6.1 stresses that the guidelines should be regarded as just that – guidelines, and that spray droplet drift models can be used to give more detailed information for specific situations.</p>	<p>Rule 56 c) states <i>"The discharge shall be undertaken in accordance with all mandatory requirements set out in Sections 2, 5 and 6 and relevant appendices of the New Zealand Standard for Management of Agrichemicals (NZS 8409:2004)."</i></p> <p>Section 5.3.3 of NZS 8409:2004 requires spray application equipment to be configured to produce optimum droplet sizes while minimising the amount of small, drift prone droplets (with reference to Appendix Q) Table G1 in Appendix G to NZS8409:2004 is a Draft Hazard Guidance Chart. This states that a particle size of < 50 microns diameter is high hazard and > 250 microns diameter is low hazard. It refers to Appendix Q1. Q1 is titled "Application Equipment for Plant Protection Products". It discusses application equipment, spray categories (very fine to coarse) and includes the BCPC nozzle code and reference nozzles (Tables Q1 and Q2 respectively).</p>	<p>Sensitive areas are areas that have within them uses or values or activities that are more susceptible to adverse effects than other users or values or activities and include occupied dwellinghouses, public amenity areas, places of public assembly, water bodies used for public water supply, any water body, wetlands, sensitive crops or farming systems, public roads and any place, area or feature of special significance to tangata whenua.</p> <p>For the Purpose of this Plan 'Sensitive activities' means the activities that occur within sensitive areas as listed above.</p> <p>Rule 56:</p> <p>h) Landowner or occupier must give verbal or written notice to all occupied dwellinghouses, owners or occupiers of properties, sensitive crops and farming systems and places of public assembly located within 30 metres of the area to be sprayed (if spraying is by ground application) or within 100 metres of the area to be sprayed (if spraying is by aerial application)...</p> <p>Standard e) states that <i>"The discharge shall not cause or be likely to cause an adverse effect from deposition into a river, lake, wetland or other surface water body, including any drain which enters into a surface water body."</i></p>

	Windspeed	Buffer Zones	Spray Quality	Sensitive Area Definition ¹³
	<p>sensitive areas thereby minimizing any drift hazard;</p> <p>(b) Not spraying hazardous chemicals (likely to cause damage) in calm (zero wind) conditions, when the drift movement direction cannot be determined, or when inversion conditions exist or may arise following application;</p> <p>(c) Not applying volatile agrichemicals in calm conditions where the ambient temperature and humidity are such that evaporation and subsequent spray drift is likely (refer to table G1, Appendix G and Appendix d) for volatility information;</p> <p>...</p>			

Table 1: Summary of Requirements for Spraying in Relation to Spray-Sensitive Areas – Northland Regional Plan

Northland Regional Plan (the following applies when spraying is undertaken within 100m of a spray sensitive area)		
Wind speed*1	Wind direction	Buffer distance requirement
Ground based – low risk		
1-3 m/s	Wind away from spray-sensitive areas	Nil
Ground based – assessed risk		
0-1 m/s	Any wind direction (not inversion conditions)	There is a buffer distance on all boundaries of the target application area of at least: Airblast spraying: • 10m with effective shelter, or, • 30m without effective shelter
1-5 m/s	Wind toward spray sensitive area	There is a buffer distance on the downwind boundary of the target application area of at least: Airblast spraying • 10 m with effective shelter, or • 30 m without effective shelter.
3-6 m/s	Wind away from spray-sensitive area	Nil

*1 the EPA proposed windspeed is no more than 20 km/hr as measured at the application site, equivalent to 6 m/s.

Effective shelter must:

- 1) be taller (at least >1 metre) than the height of the spray plume when the plume interacts with the shelter; and
- 2) have foliage that is continuous from top to bottom; and
- 3) achieve in the order of 50% optical and aerodynamic porosity; and
- 4) have a high surface area (note that fine needles are more effective at collecting fine spray than broad leaves); and
- 5) not be deciduous; and

6) have a minimum height of 3.5 metres; and

7) have a width to height ration of 1:3.5.

Note: Artificial shelter may also be useful in reducing spray drift (for example overhead hail netting for kiwifruit and apples).