Waikato Regional Council Internal Series 2018/09

Equine Sector Information and Messaging

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Waikato REGIONAL COUNCIL
Te Kaunihera ā Rohe o Waikato

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May 2018

Document #: 12617026

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Acknowledgements

The eleven property owners
Associate Professor Chris Rogers (document reviewed)
Samantha Murray (editorial assistance)

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Executive summary

Waikato Regional Council (WRC) sought to gain a better understanding of the equine community in the Waikato and Waipa catchments that are affected by Healthy Rivers Wai Ora: Proposed Plan Change 1 (PC1).

As the quantum of equine properties is not known in the catchment, a range of diverse property types were selected and their owners interviewed to gain a better understanding of equine property practices and their knowledge of environmental impacts on water quality.

There were 11 properties in the survey. Property sizes ranged from 2 ha – 295 ha. Seven were run as a business, three were lifestyle/hobby properties and one combined business and hobby.

Generally there was a low level of awareness of WRC function and processes. This is in line with other groups where there has not been ongoing direct interaction with Council.

Participants received industry and environmental information in a range of different formats, including print, electronic (email and websites), social media, meetings and trusted industry experts.

Horses are viewed differently to other pastoral animals in that they are performance athletes or companion animals rather than kept for their productive capacity like cattle and sheep. This influenced how horses are seen as impacting on water quality.

All properties excluded horses from water bodies by temporary or permanent fencing.

All that applied fertiliser used soil tests and/or a consultant when deciding on fertiliser applications. Organic fertiliser was often used, particularly the smaller more intensive properties, as this doesn't require keeping horses off pasture after application until a rain event. No property used nitrogenous fertilisers as lush pastures can cause health and behavioural problems in horses.

Horse dung in paddocks is either collected or regularly harrowed to prevent areas becoming rank. Dung that is collected from paddocks is generally stored on a muckheap and in most cases for more intensive properties, is removed from the property. Alternatively it was spread on the property or used as garden compost.

All properties surveyed had stables. The primary driver for using stables was for horse health and horse management. Seven of the 11 properties stabled horses when wet to reduce pasture damage. Other wet weather practices included, putting stock on higher ground, using raceways or moving the horses to another property.

All properties are affected by PC1. Smaller properties will only have to register. There is some lack of clarity for properties between 4 and 20 ha and the calculation of stocking rate. For properties over 20 ha it is the requirement not to graze land over 15 degrees, this will mean a controlled activity consent will be required.

Establishing a nitrogen reference point for those that required one under PC1 proved problematic. Four properties in the survey were selected that had provided sufficient

input data to run Overseer. However, the workarounds required to make the programme run did not seem appropriate for equine properties. For two properties, no result could be obtained and the other two had a low level of confidence as to their accuracy.

There is not a singular industry organisation that represents the whole equine sector. Common points of contact across the sector are veterinarians, feed suppliers and fertiliser representatives and are potential messaging pathways.

There are practices undertaken in the equine sector that have positive environmental benefits that need to be acknowledged, such as fencing waterways.

Where change in practice is required to improve water quality, solutions need to be equine specific and tailored to equine management practices.

There needs to be confidence that the tools used are relevant and have the required accuracy if there is to be engagement within this sector and change in practice. There needs to be further assessment of Overseer use on equine properties particularly if it is to be used as a regulatory tool.

1 Introduction

Waikato Regional Council (WRC) has recognised that in managing land use practices there has been little engagement with the equine sector, with the majority of the focus to date being on the agricultural and horticultural sectors. Further, there is little understanding of management practices of equine properties including whether there are significant differences across the equine sector.

With Healthy Rivers Wai Ora: Proposed Plan Change 1 (PC1) in the First Schedule Process, Waikato Regional Council considers it timely to better understand the equine sector, particularly in the Waikato and Waipa catchments.

Note the report was finalised after the notification of the Proposed Variation 1 (PV1) to PC1. Where appropriate, the report includes PV1 in regards to the withdrawn area and proposed date changes.

The report reflects PC1 and PV1 as they are proposed. As the First Schedule process is yet to be completed and PC1 finalised, it is possible there will be changes to PC1 and how it will impact on the equine sector.

2 Process

A range of equine property owners in the Waikato – Waipa catchment that is covered by PC1 were contacted and asked to participate in an interview. They included small lifestyle property owners, professional competition businesses, pre-training, racing and large thoroughbred breeding operations.

As the total number of equine properties in the Waikato – Waipa catchment is not known, the property selection process gave no consideration to the proportion of property types in the Waikato – Waipa catchments. Rather, the aim was to find a range of equine properties that exist and assess their similarities and differences in operation. At least two known equine property types are not part of this analysis, that is large racing stables and agistment properties and there may well be others that will not fit within the range described here.

Only one party that was approached declined to partake due to having moved off their property. All others that were approached agreed to participate. The first two interviews were done prior to the Christmas break with the balance in January and early February. Organising interview times through this period caused some problems due to the Christmas holiday period as well as January being a busy month for sport horse competitions, racing carnivals and the thoroughbred sales. As a result interviews were taken at various times of the day including evenings.

At the start of the interview participants were provided background of the project and advised that no identifiable information relating to them or their property would be provided to Council without their express consent. Participants were given the option of reviewing the draft report and being able to provide comment which they all wished to do. Limited feedback was provided, and participants were generally happy with how the report was framed and presented. Feedback has been incorporated where appropriate.

Interview results and feedback was collated and form the basis of this report.

3 Property Types

Table 1: Property Type

Property type	Size (ha)	Number
Lifestyle	2.6 – 20	3
Professional sport horse	2.6 – 8.8	4
Racing	2	1
Thoroughbred breeding	180 – 295	2
Mixed	4.8	1

Property sizes ranged from 2 – 295 ha. All were owner-operated except for a 2.6 ha block that was leased and one property that had 6.5 ha owned and 13.5 ha leased. Of the 11 parties interviewed, seven were run as a business, one as a combined business/ hobby and three were lifestyle owners (lifestyle being defined where the horses were not seen as a source of income).

4 Participant Understanding of Waikato Regional Council

Participants were asked about their knowledge of Waikato Regional Council (WRC) and what it does. In developing a communications and engagement strategy it is useful to know the level of understanding of Council functions and processes.

Overall participants had limited knowledge of the functions of Waikato Regional Council. Beyond paying rates which most identified, few had had direct contact with Council. About half of the participants knew WRC activities had an environmental focus with two identifying the management of water quality as a function of Council. There was also a lack of understanding of the different roles of district councils (territorial authorities) and regional councils.

While no participant held a resource consent when asked if they had had any interaction with Council, there was a correlation between those that had contact and having greater understanding of Council activities.

Contact participants had with Council;

- WRC staff undertaking a riparian survey;
- Seeking assistance to manage a rabbit population;
- Sought a grant for fencing a wetland;
- Letter re withdrawing area from PC1;
- Rubbish/recycling;
- Permits for buildings;
- Trickle feed water.

Discussion

Given that historically equestrian properties have been a permitted activity under WRC planning regulations it is understandable that equine property owners have had little interaction with WRC. That WRC activities have not impacted on their businesses or lifestyle means there has been little incentive to have a greater understanding of Council.

Recommendation:
In developing any communications and engagement strategies with the equine community, whether face to face or written WRC needs to be cognisant of the low level of awareness of Council functions and processes.

5 Receiving Information

Participants were asked a series of questions around how they received information, both equine and environmental. For equine information industry group websites and social media group pages (particularly for the sport horse, lifestyle owners) were the most common response.

Those participating in the racing or breeding sectors indicated they received most of their information from NZ Racing, NZ Bloodstock and Waikato Thoroughbred Breeders Association and their respective websites and publications. Those that were directly involved in organisations as committee members found the discussions at these meetings were useful for getting and sharing information. Social media such as Facebook was less used as an information source for the thoroughbred breeders.

For those in the sport horse industry whether as a business or hobby, social media (primarily Facebook) and websites dedicated to the sport horse industry were the primary form of receiving information.

Industry experts such as veterinarians, feed companies, fertiliser sales people and trainers (show jump and dressage) were also seen as sources of information on how to run their business and property management.

In regard to environmental information, most didn't receive environmental information or seek it out. As one said, "They don't know what they don't know". One participant thought they did have enough information but this person was on a committee of their industry group and had also engaged a farm consultant. Two other participants learnt about environmental issues through their work. One is a rural professional and is exposed to environmental information through their rural professional networks. The other talked to farmers and farm businesses in their work and felt they learnt a lot around how environmental issues affect farmers but didn't necessarily relate that to their own property.

When asked if equine specific information would be useful, five of the 11 said no. This response can be attributed to that most participants didn't associate that there could be environmental impacts by horses on water quality aside from horses directly accessing water (see Section 5 below). Most also believed that horses were farmed less intensively than other livestock, in particular dairy cows.

When asked how they would prefer to receive environmental information there was a range of responses, generally in line with how they receive equine specific information. Written information was the most popular. As one said, "It's good to have something you can refer back to". Only two participants indicated that they thought field days or other face-to-face communication would be valuable. However, it was noted during interviews that there was an increased level of engagement and interest as they got a greater understanding of the interaction of horses with the environment.

Participants were also asked if environmental information for the equine sector needed to be specific to their issues and needs, specifically that horses are managed

differently to other stock. Those that had seen environmental information for the other sectors (dairy, drystock) felt it wasn't particularly relevant to them.

Discussion

Like most sectors, individuals have varying preferences to receiving information. Uncertainty by the participants as to whether equine environmental information would be useful to them is likely to be a bigger barrier to uptake than what format the information is presented in. People need to see a value proposition before engaging. The use of trusted industry experts such as veterinarians, feed and fertiliser consultants could be useful to create the value proposition.

Recommendation:
A range of formats of information delivery is required that meets the needs of the equine owner's preferences. It will be important that all messaging is consistent and is relevant to the equine sector. The use of industry experts should be considered in the engagement process.

6 Horses and the Impact on Water Quality

Participants were asked a range of questions around perceptions and understanding of the impact on water quality from farming, including horses.

When asked if they'd seen any media on the impact of farming on water quality two said they hadn't seen anything. Nine participants reported that they had seen something in the media and a range of responses were provided including;

- Greenpeace is very one sided;
- It's just nature – haven't seen proof of cause and effect;
- Mountain out of a molehill;
- All for healthy rivers – we want a clean environment;
- Not entirely convinced farming is the sole cause;
- Degree of sympathy for both sides – it's not just a rural issue;
- Farming does have an impact and needs to improve but not negatively impact the farm business;
- Never really thought about it

The responses show a reasonable level of awareness of environmental impacts and that there needs to be a balanced approach. Several respondents noted that it's not just a rural problem and that urban areas need to take responsibility for their impacts also, which could infer recognition that everyone is part of the problem (or putting the blame elsewhere).

When asked if they had heard of Healthy Rivers Plan Change 1 (PC1), three said they hadn't heard anything. Of the eight that had, three had read Facebook posts I had done over a year ago trying to engage the equine community. Of the others, one was in the withdrawn area of PC1 and had received a letter. Other comments included;

- I'm from a dairy farming background, it's about fencing waterways and riparian areas;
- Yes but didn't realise it could affect equine, I have a lot of worried rural clients including lifestyle;
- I made a submission, I was worried it could make my business not viable with the stocking rate restrictions;
- I do not know specifics but am aware we might need a nitrogen reference point and may have to produce an environment plan. I understand it has been generated with no consideration of horse properties or equine businesses

From these comments it is likely that there is a range of awareness of PC1 across the equine community. This awareness ranges from nil to some but with little understanding of detail or how it could affect equine properties.

When participants were asked if they considered horses to have an impact on water quality seven didn't consider that they did. Of these four didn't consider horses had any impact if they weren't allowed to access water. Three participants didn't think they did as they considered horses to not be farmed as intensively as other stock types, such as dairy cows. However, four thought horses would have an impact on water as "all animals affect the environment" and they "all pee and shit".

When asked if they considered environmental impacts when making decision about how they manage the horses on their property, a range of responses were provided. The driver was commonly not for environmental or water quality benefits but for animal health or aesthetic reasons which may have environmental benefits. Comments included;

- Farm decisions are primarily for animal health and we consider most decisions to be positive for the environment. The aim is to produce athletes so we run a low density system with low fertility as don't want stock to grow too fast as they will get bone density and other health problems;
- Harrow or remove dung from paddocks;
- Take horses off paddocks when wet;
- Plant trees;
- Fence off waterways;
- Weed control – to make the property to look nice

Discussion

The different perceptions of horses on the environment when compared with other farmed animals can possibly be attributed to horses being viewed differently to other farmed stock. Horses are not farmed as production animals for meat, milk or wool with growth measured by inputs and outputs. Rather horses are seen primarily as athletes and are produced to perform whether as a racehorse or as a sport horse or are considered a companion animal not unlike domestic pets.

Recommendation:
Communications need to reflect the range of understanding of the impact that horses can have on the environment. It is important that horses are viewed differently to other pastoral animals in that they are performance athletes whether racing or sport horse and/or companion animals. Specifically, in regard to PC1, WRC needs also to be aware that the limited knowledge and understanding of how horses may impact on the environment in particular contaminants (N, P, sediment and microbial pathogens) to water.

7 Waterways

Of the 11 properties seven had waterways and four did not. Waterways included;

- Waikato River boundary;
- Named streams;
- Drains
- Ephemeral drains;
- Wetland/ponds
- Constructed wetlands;
- Constructed ponds;
- Springs

There was little to no correlation between whether participants had waterways on their properties and whether they considered horses impacted on water quality.

Of the seven participants that had waterways, three had permanent fencing for all waterways. Four participants used temporary fencing when horses were in paddocks next to waterways or had a mix of temporary and permanent, with one participant planning to construct permanent fencing. One will continue to use temporary fencing on one stream due to regular flooding risk.

The setback of fences ranged from 0.5 metres to 40 metres, with most being around 1 metre. Larger setbacks were used when the contour warranted it. Two participants had done riparian planting and one that had just completed permanent fencing planned to plant. One participant said they wouldn't riparian plant due to flooding risk.

Discussion

Owners recognised all waterbody types including ephemeral, wetland and springs, not just rivers, streams and drains. The exclusion of horses from waterways is common practice on equine properties, using a mix of permanent and temporary fencing. Horse exclusion from waterways is undertaken for horse management reasons as much as for environmental benefits that may occur.

Recommendation:
The practice of excluding horses from waterbodies on equine properties by owners needs to be communicated to them highlighting the positive environmental benefits.

8 Property Management

Participants were asked about their horse and property management. The questions asked related to those practices that could impact on water quality either positively or negatively such as fertiliser use and stabling. It should be noted that some practices such as stabling and dung removal from paddocks are undertaken for horse management including health and welfare. These practices are not new and have been considered normal equine management long before environmental considerations were contemplated.

8.1 Fertiliser

In regard to fertiliser use, of the 11 involved in the survey, eight participants had applied fertiliser, one did very rarely (once in 12 years) and two had never applied fertiliser.

When asked how they determined when fertiliser needs to be applied, four based their decision on soil tests, three relied on sales consultant's advice who undertook soil and in some cases a pasture analysis. One applied fertiliser as paddocks came available. Autumn was the primary application time with three participants also applying in spring as a split autumn/spring application.

In regard to what type of fertiliser is applied, all applied lime on a regular basis. Lime is required when horses are the predominant animal grazed as they tend to turn soils acidic (horse sick). Half of those using fertiliser used the organic seaweed based product Agrisea. It was the smaller blocks using Agrisea as they had fewer options for keeping horses off recently fertilised pasture and Agrisea does not have a withholding period after application. For health reasons horses are generally kept off fertilised pasture until a significant rainfall event has occurred.

When asked how much fertiliser was applied, most did not know specifically, generally responding as per soil test and/or consultant recommendations with one not having applied fertiliser in the last two years as soil test had shown it was not required.

Discussion

Of those that did apply fertiliser, all based their decision either on a soil test, consultant expertise or both. The use of organic type fertiliser is popular on smaller intensively managed properties primarily for the nil withholding time. This is because these properties don't have the flexibility to keep horses off pasture if there is a significant delay for a rainfall event.

No one used nitrogen-based fertilisers. This is probably because rapid growing lush pasture is known to cause health and behavioural problems in horses. As has been previously mentioned horses are produced as athletes and rapid weight gain can be detrimental to horses health and development.

Recommendation

WRC should be aware that pasture growth requirements on equine properties are different to other pastoral sectors. Further that, nitrogenous fertilisers are not

generally seen as necessary as fertiliser is being applied to maintain soil and pasture health rather than to maximise growth.

8.2 Effluent Management

The removal of horse dung from paddocks is reasonably common on equine properties, especially the smaller more intensive properties. The primary reason for this is horse health by reducing the risk of ingesting worms. Larger more extensively run properties tend to manage the health risk by harrowing and/or cross grazing with either cattle or sheep.

Five of the participants collected their dung from the paddock with one other only collecting from smaller paddocks on the property. This owner had also purchased dung beetles for the larger paddocks but is still waiting for the beetles to breed up to be effective. Of those that collected dung, one did so by using a paddock groomer towed behind an ATV with the rest collecting manually with a wheelbarrow and fork.

Of the five participants that didn't collect dung, all harrowed their paddocks.

Those that collected dung were asked what they did with it (including dung and bedding removed from stables). One participant spread it around trees on the property with the rest all collecting to a muckheap. All muckheaps but one, which was located on a concrete pad, were on unsealed the ground or a sand pad. None of the muckheaps had specific drainage.

Removal of the muckheap was generally by a contractor (4) who takes it for composting. Others used the composted dung on their own properties (gardens) or had it taken away by friends or bagged and left at the gate for local gardeners.

Discussion

The management of effluent is common practice on equine properties, whether by removal or harrowing. The primary reasons for this practice is horse health (reducing the worm burden) and pasture management. Horses tend to pass dung in a specific area in a paddock which then becomes a latrine area. Horses will not graze this area unless dung is removed, harrowed or cross-grazed.

It is normal practice for removed dung to be stored in a dung pile until it is removed (generally off the property). Most muckheaps are not on sealed surfaces and do not have management of runoff or storm water. It could be assumed that unsealed dung piles and no management of storm water runoff may pose an environmental risk, particularly in the vicinity of waterways.

The practice of dung removal and/or regular harrowing especially on smaller or more intensive properties is a practice unique to equine properties compared to other pastoral systems. While there will be discharges of contaminants from urine (particularly N) on paddocks, the removal of dung may have implications in calculating losses using the Overseer model (see Section 9).

Recommendation

Communication by WRC needs to recognise that the practice of collecting and/or spreading dung by equine owners for animal health reasons also has environmental benefits. Further work needs to be done to consider the environmental risks of having effluent on unsealed surfaces and no management of stormwater runoff from muckheap pads.

The different practices for managing dung on equine properties compared with other pastoral systems needs to be considered when attributing contaminant losses.

8.3 Stables and yards

Stabling and yarding are common practice for equine properties whether they are run as a business or lifestyle.

All properties in this survey had stables. Three of the property's stables had concrete floors. The rest had sand, rotten rock, or compacted lime type flooring. Two of the concrete stables had drainage both to a seep type system with one linking to the property's drainage network. None of the others had drainage.

Seven of the 11 properties had yards with the surfaces being a porous base of either sand, crusher dust or rotten rock. One property had grass yards.

When asked when they used stables or yards, they were used primarily for horse management reasons or pasture management, generally a combination of both. Reasons included;

- Yearling preparation for the sales. Yearlings are generally only stabled for 4 – 5 hours/day for 2 – 3 months prior to the January sales.
- When being prepped for show – the night before a show
- Racehorses/competition horses at night when in work
- When wet to take pressure off paddocks (7)
- For sick or injured animals

Seven of the 11 participants took horses off paddocks and stabled or yarded them when it was wet. Other practices to manage pastures when wet included;

- Use paddocks on higher ground
- Spread horses across the property and/or move horses to another property (Thoroughbred stud)
- Use raceways as a stand off

Three had sandy free draining soils and did not consider winter management practices to be necessary.

Discussion

The use of stables for winter management and wet weather is a relatively common practice on equine properties. This will mean less pasture damage and reduce the

potential for contaminant runoff. However stable management is driven by horse health and management with little consideration of impacts of urinary runoff through stable flooring or by seepage. It should be noted, that stabled horses will have some form of bedding, generally shavings or sawdust type material. The wet bedding and dung is removed daily to the dung pile.

Recommendation:
Communication by WRC needs to recognise the positive environmental benefits of stabling horses when wet. Further work needs to be considered on the impact of urine seepage that is not caught by bedding on non-sealed stable floors.

8.4 Feed

Most horses are fed supplementary feed that includes hay/baleage type feed and grain type feed. For this discussion, grain-based feed refers to all non-pasture based feed and includes oats, barley, maize, soybean, sugar beet, rice, copra and peas. For performance horses, whether racehorse or sport horses, a sizeable portion of their nutritional needs will be from other sources rather than grazed pasture to manage intake and optimise performance. For these horses, access to pasture is as much for psychological health as nutritional intake.

Horses in less intensive work such as pony club mounts are more likely to have a primarily pasture based diet[1] and have less reliance on supplementary feed. Similarly, turned out horses, broodmares and young stock will also be fed a primarily pasture based diet with supplementary feeds given when required to maintain condition and/or growth.

Seven of the properties made hay or baleage but in general, the smaller more intensive properties did not make their own. One exception to this was a 2 ha property with 10 horses that made 60 conventional bales of hay, which further illustrates the non-reliance of pasture as a direct feed source. Of those that made hay or baleage, four participants used all on the property, two sold part of what they made, and one sold all the hay and baleage they made.

All properties fed hay and/or baleage throughout the year. All also fed grain based feed throughout the year. The amount fed depended on how much work the horse was doing (racehorse, sport horse or turned out), how old the horse is (still growing or mature) and condition of the horse (good doer or poor doer).

Discussion

For horses that are in work either as a sport horse or racehorse, there is a greater reliance on supplementary feed than pasture intake to meet nutritional needs. The reliance on supplementary feed throughout the year, even if there is adequate pasture, will make it difficult to extrapolate assumptions made for other pastoral sectors (dairy, sheep and beef) in relation to contaminant losses that may occur on equine properties.

[1] *Fernades KA, Rogers CW, Gee EK, Bolwell CF, Thomas DG. Body condition and morphometric measure of adiposity in a cohort of Pony Club horses and ponies in New Zealand, NZAP 2015 Vol.75*

However equine breeding operations such as stud farms where pasture is more likely to be the main source of nutritional intake, such an extrapolation could perhaps be presumed but see Overseer Section 9 which raises concerns about the accuracy of doing so.

Recommendation:
WRC needs to be aware that the feeding of horses in the equine sector should not be based on assumptions of other pastoral sectors.
WRC should consider undertaking further work to establish what impact this may, or may not, have in relation to contaminant losses, particularly nitrogen.

9 Healthy Rivers Wai Ora Plan Change (PC1)

All of the interviewee's properties fell within the Waikato - Waipa catchments and are therefore captured by PC1.

From the information provided each property was assessed by how PC1 as notified would affect it and what actions would need to be undertaken. [2]
(Note the rules section of PC1 is attached in its complete form in Appendix 4)

9.1 Property Location and Priority

Table 2: Property Location and Priority

Freshwater Management Unit	Subcatchment	Priority	Notes
Waipa	Mangapiko	2	
Middle Waikato	Mangawhero	1	
Middle Waikato	Narrows	3	
Middle Waikato	Mangaone	2	
Middle Waikato	Mangakotukutuku	1	Leased from NZTA – property does not show on Find My farm
Middle Waikato	Bridge St Bridge	1	
Middle Waikato	Bridge St Bridge	1	
Middle Waikato	Waikato at Narrows	3	
Middle Waikato	Mangaone	2	
Lower Waikato	Whakapipi	1	
Lower Waikato	Mangawara	1	

Eight of the 11 properties are in the Middle Waikato Freshwater Management Unit (FMU), located around the equine intensive Cambridge area. One property is in the Waipa FMU with the other two being in the Lower Waikato FMU.

Four of the properties are in Priority 1 areas, three are Priority 2 and two are in Priority 3. The priority reflects the timeframes for when compliance with PC1 needs to be completed with Priority 1 in a shorter timeframe than Priority 3.

[2] The report was finalised after notification of the Proposed Variation 1(PV1) to PC1. The report includes PV1 in regard to the withdrawn area and dates changes.

9.2 Stocking Rate (Intensity)

Table 3: Stocking Rate

Priority Area	ha	Total stock (stock units/ha) (Includes sheep and cattle if they have them)
2	4.8	34.2
1	295	29.9
3	180	18.2
2	2	65.9
1	2.6	23.1
1	8	15.9
1	8.8	23.7
3	4	45
2	2.6	36.9
1	20	7.6
1	10	12

The stock units/hectare of the interview properties shows a range from 7.6 – 65.9 SU/ha. Of note is that none of the properties are under the stock unit threshold of PC1 (6SU/ha). Also there is a tendency that the smaller the block the higher the stock units/ha. Those that are under 4.1 ha and are only required to register under PC1, have stock unit ranges from 23.1 SU/ha to 65.9 SU/ha.

9.3 Rule Framework

Rule 3.11.5.1 Permitted activity Rule – Small and Low Intensity farming activities
To comply with this rule a property needs to:

- Exclude cattle, horses, deer and pigs from water bodies as per Schedule C
- If over 2 ha needs to register as per Schedule A

And

- Either be under 4.1 ha and not part of another enterprise; or
- Over 4.1 ha and less than 6 SU/ha

Four of the participant's properties are under 4.1 ha and are not part of another enterprise. Of these four properties, three don't have waterways and one has drains that are permanently fenced 1 metre from the drain so are compliant with Schedule C. Therefore, these properties will only require registration as provided in Schedule A to be compliant with 3.11.5.1.

The other seven properties are larger than 4.1 ha and all exceed 6 SU/ha, therefore do not comply with Rule 3.11.5.1.

Rule 3.11.5.2 Permitted Activity Rule – Other farming activities
Seven of the properties default to this rule as they are over 4.1 ha and exceed 6 SU/ha.

Where the property is between 4.1 and 20 ha the following is required;

- The farming activities do not form part of an enterprise being run on more than one property; and
    - The stocking rate is no greater than the stocking rate as at 22 October 2016; or
    - The diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens is no greater as the land use at 22 October 2016.
- Upon request provide verification to WRC by a Certified Farm Environment Planner that the land use is compliant with above; and
- Upon request provide to Council a description of the current land use activities; and
- All new fences are 3m from a water body

Where the property is greater than 20 ha the following is required;

- Provide a Nitrogen Reference Point (NRP) as per Schedule B and that the diffuse discharge of nitrogen is less than the NRP or 15kg N/ha/year whichever is the lesser; and
- No part of the property that is over 15-degree slope is grazed or cultivated and
- No cultivation closer than 5m of the bed of a water body
- All new fences are 3m from a water body.

In addition, all properties over 4.1 ha in addition to providing information as required by Schedule A must also provide the following;

- Annual stock numbers
- Annual fertiliser use
- Annual bought in animal feed

Four of the seven properties are between 4.1 ha and 20 ha. Of these none are part of another farming enterprise. All properties had fluctuating numbers of horses, especially those who operated as a business. The application of the stocking rate, in this rule, is open to interpretation. If the stocking rate is fixed as at the date of 22 October 2016 only one of the properties had their maximum number of horses on during late winter/spring and would be able to comply so long as they kept their stocking rate at or below that number. The other three properties would have to reduce their stock numbers to meet the 22 October 2016 date requirements or be in breach of this rule and default to rule 3.11.5.6 Restricted Discretionary Activity Rule.

Alternatively, the requirements could be calculated at an annualised stocking rate. If this method was applied, all four properties are likely to be able to comply with this provision so long as they did not increase the annualised number of stock on the property over a 12-month period.

Three of the properties are over 20 ha. Two of these properties graze land over 15 degrees and under current practices default to Rule 3.11.5.4. One of these properties includes a lease block that does not graze the horses and are effectively managed as separate blocks, so a work around in this situation could be to run the properties as separate enterprises under 20 ha. As properties between 4.1 and 20

ha do not need to comply with the 15 degree grazing standard, they could comply with 3.11.5.2 so long as they are able to meet the stocking rate requirements.

The other issue for equine blocks over 20 ha is the requirement to provide an NRP and then ensure the nitrogen discharge does not exceed the NRP or 15kg/N/ha/year whichever is the lesser. Overseer is the model to be used to determine the NRP. See Section 9 for discussion on the use of Overseer for equine properties. The issues that are raised about the use of Overseer on equine predominant properties provide concern about it being used as a regulatory tool when a NRP is required.

Compliance with this rule also requires a reasonable level of record keeping. Record keeping was not asked about during the interviews. Those participants operating as a business would be expected to have undertaken some level of record keeping however, whether it is sufficient to provide the information required by Rule 3.11.5.2 is unknown.

Non compliance with this rule will mean that properties would default to Rule 3.11.5.4 if they are able to maintain or decrease their nitrogen losses at or below the NRP and other contaminant losses with a Farm Environment Plan, otherwise a restricted discretionary consent will be required under 3.11.5.6.

Rule 3.11.5.4 Controlled Activity Rule – Farming activities with a Farm Environment Plan not under a Certified Industry Scheme

At least three of the properties would be required to comply with Rule 3.11.5.4.

Compliance with this Rule requires a Controlled Activity Consent that includes

- A NRP as per Schedule B
- Registered with WRC as per Schedule A
- Excluding stock from waterways as per Schedule C; and
- Prepare a Farm Environment Plan as per Schedule 1 and approved by a Certified Farm Environmental Planner by 1 March 2022 for priority 1 catchments; 1 March 2023 from priority 2 catchments or 1 January 2026 for priority 3 catchments.[3]

Rule 3.11.5.6 Restricted Discretionary

Any property that is unable to comply with Rules 3.11.5.1 to 3.11.5.5 will be required to get a restricted discretionary resource consent. A restricted discretionary resource consent may or may not be granted.

Council discretion on whether to grant a consent is restricted to matters relating to contaminant loss that could affect the water quality in the catchments of the Waikato and Waipa Rivers, the term of the consent, record keeping and the provision of information.

[3] As amended by PV1

Discussion

Of the 11 properties in the survey, based on the information provided, four would only be required to register their properties as they are smaller than 4.1 ha. Four of the properties are between 4.1 and 20 ha and could be compliant with Rule 3.11.5.2 dependant on how the stocking rate requirement is assessed.

Three of the properties are over 20 ha. One of these properties could be compliant with 3.11.5.2, the other two have land that is grazed that exceeds 15 degrees and would be required to comply with Rule 3.11.5.4.

While it is acknowledged that those interviewed are not necessarily statistically representative of the equine properties in the Waikato Waipa catchments, it does indicate that a reasonable number of equine properties will be required to complete a NRP and potentially a Farm Environment Plan. This number could be greater if those with properties between 4.1 – 20 ha consider maintaining their stocking rates as at 22 October 2016 is detrimental to their business or use of their property.

Recommendation:

That WRC recognise that there could be a greater number of equine properties than possibly anticipated that will be required (or choose to) to complete a NRP and Farm Environment Plan. If this is the case, WRC will need to consider how this will be managed given the diverse nature of the equine sector and that there appears little sector or industry systems (compared to other sectors), available to support equine property owners through the process.

10 Getting a Nitrogen Point (NRP) – using Overseer

Of the participant's properties, at least three of 11 would be required to get a Nitrogen Reference Point (NRP) using Overseer. Through the interview process we were able to obtain sufficient data to run Overseer. A consultant (Dr Debbie Care, AgVice Ltd.) who is qualified in running the software, was engaged to run a selection of the properties through Overseer.

Four properties were selected. Two properties gave a result of 17 -36 kg N/ha/year respectively, with several work arounds having to be implemented to achieve a result at all. Two properties were unable to achieve a result even with the work arounds. While further investigation is required it indicates there should be very low trust in the appropriateness of Overseer to be used as the tool to define the NRP on equine properties.

Discussion

The use of the sheep algorithms for horses does not seem to be appropriate e.g. ruminant animals vs. hindgut fermenters. Sheep have frequent small urinations whereas horses tend to have fewer, larger urinations. Horses may not produce an identifiable output (currently meat, wool and milk in Overseer) – they have intensive feed (hence energy) regimes which is often is expended in training with no actual weight gain. Management of horses and feed is very different to sheep and cattle. They are often fed supplements on a surface rather than in the paddock

and at the moment the only structures that can be modelled are for beef or dairy, this means that Overseer assumes a 70% utilisation of feed where it is more likely to be at least 85-90%.
Pasture growth is unrealistically high for the farms and is what is crashing Overseer most of the time (37-40 t/ha of grass). Ryegrass clover is the most common pasture type, but clover is managed low as it has unwanted effects on horse health and behaviour – this means that the fixation input would be artificially high for this type of operation. Other issues that arose are listed below:

Issues that arose were:

- Bought in feed. There was no proxy to match the energy density of the grain component of any bought in feed. Equine feed is not calculated in ME as required by Overseer, only MJ/kg
- Overseer will not allow housing (stabling) of horses, only cows. A work around could be to convert horses to cows to allow for this but still asks for storage and liquid effluent to run the programme – this can be exported off the property, but still means that cow values are used and this invalidates any conclusions
- The use of organic fertiliser (Agrisea) is relatively common practice on equine properties and there is no data on nutrient content for this fertiliser so it cannot be accounted for in Overseer.

Overseer in its current form is not fit for purpose to calculate the impact of equine operations on the nitrogen loss of the property. It should not be used to calculate the NRP as this will lead to inaccurate results of dubious reliability and could be detrimental to the whole process. However modification to the Overseer programme should not be too onerous with industry support.

Recommendations

The above points mean that the use of the current version of Overseer is not appropriate for establishing the Nitrogen Reference Point for those equine properties that need it. If we are able to get a result, the trust in that number is very low and most results are likely not accurate. The basic soil, weather and other background information in Overseer is good, what is needed is an update that would allow for the differences in horses including their metabolism, functions to allow for performance with no weight gain, urinary N concentrations and urination frequency, as well as feed density to match growth, and the option to tailor pasture composition to better match reality.

11 Conclusion

The survey while not statistically robust provides an insight into the range of equine properties in the Waikato and Waipa River catchments. The lack of homogeneity is possibly greater than any other pastoral sector. The diversity of management and use of horses, along with being much smaller than other pastoral sectors, such as dairy and drystock, creates challenges for developing communication and engagement strategies that will reach equine property owners but remain cost effective.

There is a range of environmental awareness across the equine community but in general little understanding of how equine property management can impact both positively and negatively on the environment, in particular water quality. This partly due to the fact that the horse is seen as an athlete or companion animal rather than a production animal and the connection between the equine sector and other pastoral sectors on environmental impact is not made.

The messaging of environmental impacts whether nationally or regionally over the last 20 years has largely ignored the equine sector. This is further exacerbated in that there is no one equine industry organisation that represents the equine sector as a whole. Rather there is a range of organisations specific to the equine activity (racing, breeding, sporthorse etc.) with their organisational focus solely on the equine activity. There is little industry leadership in the equine sector on equine property management and environmental practice.

Veterinarians, feed suppliers and fertiliser representatives are where there is common engagement across all horse owners. Using these suppliers as a pathway to engagement could be a cost effective and efficient way getting environmental information to the equine sector.

While there appears to be similarities in practices between equine properties and other pastoral sectors, such as the grazing of pasture, bought in feed, effluent management etc. that horses are being produced as athletes rather than the production of meat, milk or fibre means the farm management outcomes are different. For example rapid growing lush pastures are not desirable on equine properties. Therefore communication with the equine sector should undertake an approach that reflects these different management drivers and approaches.

Gaining trust is important in an engagement process. One step in achieving this is to ensure information is accurate and relevant. The use of Overseer to measure nitrogen loss from properties is one area that should be further assessed for its relevance to equine properties. The properties assessed in this survey could either not achieve a result or if they could, there was little confidence in the result that was provided as the work arounds offered were generally not appropriate for equine properties.

Going forward, engagement should focus on what the equine sector is doing well at in regard to in environmental practice (e.g. fencing waterways). If improvements in property practice are needed, then this needs to be done by tailoring specific equine property based solutions that reflect the horse owner's drivers.

Appendices

Appendix 1. Information Sheet

Waikato Regional Council Equine Engagement Project

I would like to invite you to take part in this project. Please read the following information.

Background

I'm an environmental consultant with extensive experience in resource management and environmental policy. I have a background in dairy farming and kiwifruit production. I have had a lifelong association with the equine sector primarily eventing including 6 years on the Board (and three years as Chair) of Eventing NZ. I currently live on a small lifestyle block near Cambridge and compete in low level dressage.

Because of my background with horses and understanding of resource management Waikato Regional Council have contracted me to provide information on horse owners as land managers so they can work better with the equine community on environmental issues.

The Project

A series of interviews from a broad range of equine property owners will provide information on their understanding of Waikato Regional Council and environmental land management. It is intended to interview horse owners from the racing, breeding and sport horse sectors including professional and lifestyle owners.

I will use this information to advise to Council in the form of a report on how to provide information and methods for engagement with the equine sector in the Waikato Region.

This interview is in two parts. Part One along with baseline property information asks questions on your understanding of environmental issues and Waikato Regional Council. Part Two asks more specific questions on your property and its management.

No identifiable property specific information will be used in the report. No identifiable property specific information will be handed to Council without your express consent.

What is involved

The interview is expected to take approximately 1 hour. There is no expectation for further involvement in the Project beyond the interview. However, you may if you wish review the report in its draft stage and provide feedback on it.

What will happen to the results

Once the report has been submitted to Council, the interview sheets from this interview and any audio, will be held for a further six months and then destroyed.

Contacts for further information

Sally Millar Sustainable Options M: 027 2781 620 Sally.millar@xtra.co.nz	Mark Gasquoine Sustainable Agricultural Advisor Waikato Regional Council P: 07 859 2796 M:021 891 648

Appendix 2: Consent Form

Waikato Regional Council Equine Information Project Consent Form

I have read the information provided on this project and agree to participate in this interview.

I agree and accept that no identifiable property information will be shared with Waikato Regional Council without obtaining further express consent.

I do/do not wish to view the draft report.

_____ _____

Name Date

Appendix 3: Interview Questions

Equine Survey

I have been engaged by Waikato Regional Council to assist them in getting a better understanding of equine properties and how they are managed. To do this I am undertaking a series of interviews with owners of a range of different equine enterprises.

Background

1. What is the size of your property (Ha)
2. Do you own or lease?
3. How many horses do you have on the property currently?
4. What is the maximum number of horses you have during the year?
5. Are horses run primarily as a business or hobby (are they GST registered or not).
6. What is the primary activity undertaken with the horses
    - Thoroughbred racing
    - Pre-training/breaking
    - Thoroughbred breeding
    - Trotters racing
    - Trotters breeding
    - Sport horse
        - Dressage
        - Eventing
        - Showjumping
        - Breeding
        - Other – pony club, showing, trekking, hunting etc.
7. Do you have any other stock on the property? Sheep cattle/goats/deer? If so how many and what ages?

    Sheep – number and ages
    Cattle Number and ages
    Other number and ages

Waikato Regional Council

8. What do you know about what Waikato Regional council does? Verbatim
9. Have you had any interaction with Waikato Regional Council?
10. If yes what interactions have you had with Council?
11. Do you have a resource consent with Waikato Regional Council?
12. If yes what is the consent for?

Property Management Environmental General

13. Have you seen any of the media around the impact that cattle and in particular dairy has on the environment in particular water quality?
14. What are your views on it?
15. Are you aware of Healthy Rivers/Wai Ora: proposed plan change 1 and how it might impact landowners, including equine?
16. Do you consider horses impact the environment? (water quality) How?
17. Do you consider environmental impacts when making decisions about how you manage your horses on the property? If so what?
18. Have you done any environmental work on your property
19. If so, what kind of benefits (if any) have you seen from doing this work?

20. Are there any waterways on your property? Permanent/intermittent
21. If so what
    - River
    - Streams
    - Drains
    - Wetlands
    - Spring
    - Intermittent/ephemeral

Information sources

22. How do you normally receive equine and environmental information?

    E.g. specific websites, newspapers, social media, neighbours, industry group

23. Do you think you have enough information on how to manage your property to minimise environmental impacts?

24(a). Are environmental issues discussed within your sector at all? Where? When?

24. Would equine specific environmental information be useful?
    - Written
    - Electronic?
    - Fielday?
    - One on one? consultant

Property Management Environmental Specific

Waterways
If answered yes to question 19

25. Are the waterways fenced so stock including horses can't get access?
26. What type of fencing?
    Permanent/temporary
27. If fenced how far from the water body?
28. Have you done any riparian planting? Explain if necessary

Fertiliser/Nutrient Management

29. Do you apply fertiliser?
30. How do you decide when and how much fertiliser to apply?
31. What type of fertiliser do you apply?
32. Annually how much fertiliser do you apply?(per hectare)
33. What time of the year do you apply fertiliser?
34. Have you ever had a soil test done?
35. Do the results of a soil test influence your fertiliser applications?
36. Do you collect dung from the paddock?
37. If yes how do you collect dung?

Pasture Management/Soil Conservation

38. How do you manage your horses in winter/when wet?
39. Do you have stables for your horses?
40. What is the flooring?

41. Do the stables have drainage?
42. Where does the drainage go?
43. Do you have yards?
44. What is the surface of the yards?
45. What do you do with the dung/bedding for stables/yards?
46. Is the muck heap on permanent surface?
47. If nowhere does it drain?
48. How do you dispose of your muck heap?
49. If taken off site do you know where it goes?
50. If you have stables/ yards when/why do you use them?
51. Do you use bought in feed? Hay Hard feed?
52. Do you make Hay/silage/baleage on the property?
53. If yes how many bales? Conventional Large?
54. If yes is all hay/ silage used on property? If any sold how many bales sold in the last year?
55. If feeding hard feed/hay/silage what type and how much per week – Hay/concentrate

    Hay

    Silage/Baylage

    Hard feed

Further information for Overseer File

56. Property Location
57. Subcatchment
58. If you have soil test done can you supply
59. Stock Units

Pony in light work or turned out	6.0
Pony broodmare and foal	8.0
Small hack (up to 15.2 hands) in light work	8.0
Small hack broodmare and foal	10.0
Large (500-600 kg) hack in light work	12.0
Yearling thoroughbred	12.0
Large hack broodmare and foal	14.0

3.11.2 Objectives/Ngā Whāinga

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

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

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

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

Objective 3: Short-term improvements in water quality in the first stage of restoration and protection of water quality for each sub-catchment and Freshwater Management Unit/Te Whāinga 3: Ngā whakapainga taupoto o te kounga wai i te wāhanga tuatahi o te whakaoranga me te tiakanga o te kounga wai i ia riu kōawāwa me te Wae Whakahaere Wai Māori

Actions put in place and implemented by 2026 to reduce discharges of nitrogen, phosphorus, sediment and microbial pathogens, are sufficient to achieve ten percent of the required change between current water quality and the 80-year water quality attribute^targets^ in Table 3.11-1. A ten percent change towards the long term water quality improvements is indicated by the short term water quality attribute^targets^ in Table 3.11-1.

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

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

a. considering the values and uses when taking action to achieve the attribute^ targets^ for the Waikato and Waipa Rivers in Table 3.11-1; and
b. Recognising that further contaminant reductions will be required by subsequent regional plans and signalling anticipated future management approaches that will be needed to meet Objective 1.

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

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

a. tangata whenua have the ability to:
    i. manage their own lands and resources, by exercising mana whakahaere, for the benefit of their people; and

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

a. new impediments to the flexibility of the use of tangata whenua ancestral lands are minimised; and
b. Improvement in the rivers' water quality and the exercise of kaitiakitanga increase the spiritual and physical wellbeing of iwi and their tribal and cultural identity.

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

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

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

Principal Reasons for Adopting Objectives 1-6/Ngā Take Matua me Whai ngā Whāinga 1 ki te 6

Reasons for adopting Objective 1

Objective 1 sets long term limits^ for water quality consistent with the Vision and Strategy. Objective 1 sets aspirational 80-year water quality targets^, which result in improvements in water quality from the current state monitored in 2010-2014. The water quality attributes^ listed in Table 3.11-1 that will be achieved by 2096 will be used to characterise the water quality of the different FMUs when the effectiveness of the objective is assessed.

Reasons for adopting Objective 2

Objective 2 sets the long term outcome for people and communities, recognising that restoration and protection of water quality will continue to support communities and the economy. The full achievement of the Table 11-1 2096 water quality attribute^ targets^ may require a potentially significant departure from how businesses and communities currently function, and it is important to minimise social disruption during this transition.

Waikato Regional Council Proposed Waikato Regional Plan Change 1 - Waikato and Waipa River Catchments

Reasons for adopting Objective 3

Objective 3 sets short term goals for a 10-year period, to show the first step toward full achievement of water quality consistent with the Vision and Strategy.

The effort required to make the first step may not be fully reflected in water quality improvements that are measureable in the water in 10 years. For this reason, the achievement of the objective will rely on measurement and monitoring of actions taken on the land to reduce pressures on water quality.

Point source discharges are currently managed through existing resource consents, and further action required to improve the quality of these discharges will occur on a case-by-case basis at the time of consent renewal, guided by the targets and limits set in Objective 1.

Reasons for adopting Objective 4

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

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

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

Reasons for adopting Objective 5

Objective 5 seeks to ensure that this Plan recognises and provides for the relationship of tangata whenua with ancestral lands, by ensuring the other provisions of Chapter 3.11 do not provide a further impediment to tangata whenua making optimal use of their land. Historic impediments included customary tenure in the nineteenth century, public works, rating law, Te Ture Whenua Māori Act, and confiscation. Some impediments or their effects continue currently, including issues of governance, fragmentation and compliance with central and local government regulations such as regional and district plans, or the emissions trading scheme. Land relevant to this objective is land returned through Treaty of Waitangi settlement, and land under Māori title that has multiple owners.

Reasons for adopting Objective 6
Objective 6 seeks to recognise the significant value of Whangamarino Wetland, a Ramsar site of international importance, and the complexity of this wetland system. It seeks to recognise that the bog ecosystems (which are particularly sensitive to discharges of contaminants) need protection over time. The effort required to restore Whangamarino Wetland over 80 years is considerable and as a minimum needs to halt and begin to reverse the decline in water quality in the first 10 years. This objective describes how wetland restoration needs to be supported by restoration of the Lower Waikato Freshwater Management Unit sub-catchments that flow into Whangamarino Wetland.

3.11.3 Policies/Ngā Kaupapa Here

Policy 1: Manage diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens/Te Kaupapa Here 1: Te whakahaere i ngā rukenga roha o te hauota, o te pūtūtae-whetū, o te waiparapara me te tukumate ora poto

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

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

Policy 2: Tailored approach to reducing diffuse discharges from farming activities/Te Kaupapa Here 2: He huarahi ka āta whakahāngaihia hei whakaiti i ngā rukenga roha i ngā mahinga pāmu

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

a. Taking a tailored, risk based approach to define mitigation actions on the land that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens, with the mitigation actions to be specified in a Farm Environment Plan either associated with a resource consent, or in specific requirements established by participation in a Certified Industry Scheme; and
b. Requiring the same level of rigour in developing, monitoring and auditing of mitigation actions on the land that is set out in a Farm Environment Plan, whether it is established with a resource consent or through Certified Industry Schemes; and
c. Establishing a Nitrogen Reference Point for the property or enterprise; and
d. Requiring the degree of reduction in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens to be proportionate to the amount of current discharge (those discharging more are expected to make greater reductions), and proportionate to the scale of water quality improvement required in the sub-catchment; and
e. Requiring stock exclusion to be completed within 3 years following the dates by which a Farm Environment Plan must be provided to the Council, or in any case no later than 1 July 2026.

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

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

a. Flexibility is provided to undertake crop rotations on changing parcels of land for commercial vegetable production, while reducing average contaminant discharges over time; and
b. The maximum area in production for a property or enterprise is established and capped utilising commercial vegetable production data from the 10 years up to 2016; and
c. Establishing a Nitrogen Reference Point for each property or enterprise; and
d. A 10% decrease in the diffuse discharge of nitrogen and a tailored reduction in the diffuse discharge of phosphorus, sediment and microbial pathogens is achieved across the sector through the implementation of Best or Good Management Practices; and
e. Identified mitigation actions are set out and implemented within timeframes specified in either a Farm Environment Plan and associated resource consent, or in specific requirements established by participation in a Certified Industry Scheme.
f. Commercial vegetable production enterprises that reduce nitrogen, phosphorus, sediment and microbial pathogens are enabled; and
g. The degree of reduction in diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens is proportionate to the amount of current discharge (those discharging more are expected to make greater reductions), and the scale of water quality improvement required in the sub-catchment.

Policy 4: Enabling activities with lower discharges to continue or to be established while signalling further change may be required in future/Te Kaupapa Here 4: Te tuku kia haere tonu, kia whakatūria rānei ngā tūmahi he iti iho ngā rukenga, me te tohu ake ākuanei pea me panoni anō hei ngā tau e heke mai ana

Manage sub-catchment-wide diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens, and enable existing and new low discharging activities to continue provided that cumulatively the achievement of Objective 3 is not compromised. Activities and uses currently defined as low dischargers may in the future need to take mitigation actions that will reduce diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens in order for Objective 1 to be met.

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

Recognise that achieving the water quality attribute^ targets^ set out in Table 11-1 will need to be staged over 80 years, to minimise social disruption and allow for innovation and new practices to develop, while making a start on reducing discharges of nitrogen, phosphorus, sediment and microbial pathogens, and preparing for further reductions that will be required in subsequent regional plans.

Policy 6: Restricting land use change/Te Kaupapa Here 6: Te here i te panonitanga ā-whakamahinga whenua

Except as provided for in Policy 16, land use change consent applications that demonstrate an increase in the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens will generally not be granted.

Land use change consent applications that demonstrate clear and enduring decreases in existing diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens will generally be granted.

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

Prepare for further diffuse discharge reductions and any future property or enterprise-level allocation of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens that will be required by subsequent regional plans, by implementing the policies and methods in this chapter. To ensure this occurs, collect information and undertake research to support this, including collecting information about current discharges, developing appropriate modelling tools to estimate contaminant discharges, and researching the spatial variability of land use and contaminant losses and the effect of contaminant discharges in different parts of the catchment that will assist in defining 'land suitability'.
Any future allocation should consider the following principles:

a. Land suitability (5)
b. which reflects the biophysical and climate properties, the risk of contaminant discharges from that land, and the sensitivity of the receiving water body, as a starting point (i.e. where the effect on the land and receiving waters will be the same, like land is treated the same for the purposes of allocation); and
c. Allowance for flexibility of development of tangata whenua ancestral land; and
d. Minimise social disruption and costs in the transition to the 'land suitability' approach; and
e. Future allocation decisions should take advantage of new data and knowledge.

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

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

a. Sub-catchments where there is a greater gap between the water quality targets^ in Objective 1 (Table 3.11-1) and current water quality; and
b. Lakes Freshwater Management Units^; and
c. Whangamarino Wetland.

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

5 Future mechanisms for allocation based on land suitability will consider the following criteria: a) The biophysical properties of the land that determine productive potential and susceptibility to contaminant loss (e.g. slope, soil type, drainage class, and geology); and b) the local climate regime that determines productive potential and the likelihood of water storage and runoff patterns (e.g. frost, rainfall and its seasonal distribution); and c) The natural capacity of the landscape to attenuate contaminant loss; and d) the Objective 1 water quality limits^ related to nitrogen, phosphorus, microbial pathogens and sediment for the surface waters that the land is hydrologically connected to; and e) the desired values^ in those receiving waters (ecological and human health) and how they are influenced by the four contaminants. The future weightings are to be determined. For the avoidance of doubt, land suitability criteria exclude current land use and current water quality, the moderating effects of potential mitigations, and non-biophysical criteria (economic, social and cultural). Instead these factors will be of importance in analysing the implications of a completed land suitability classification.

Policy 9: Sub-catchment (including edge of field) mitigation planning, co-ordination and funding/Te Kaupapa Here 9: Te whakarite mahi whakangāwari, mahi ngātahi me te pūtea mō te riu kōawāwa (tae atu ki ngā taitapa)

Take a prioritised and integrated approach to sub-catchment water quality management by undertaking sub-catchment planning, and use this planning to support actions including edge of field mitigation measures. Support measures that efficiently and effectively contribute to water quality improvements. This approach includes:

a. Engaging early with tangata whenua and with landowners, communities and potential funding partners in sub-catchments in line with the priority areas listed in Table 3.11-2; and
b. Assessing the reasons for current water quality and sources of contaminant discharge, at various scales in a sub-catchment; and
c. Encouraging cost-effective mitigations where they have the biggest effect on improving water quality; and
d. Allowing, where multiple farming enterprises contribute to a mitigation, for the resultant reduction in diffuse discharges to be apportioned to each enterprise in accordance with their respective contribution to the mitigation and their respective responsibility for the ongoing management of the mitigation.

Policy 10: Provide for point source discharges of regional significance/Te Kaupapa Here 10: Te whakatau i ngā rukenga i ngā pū tuwha e noho tāpua ana ki te rohe

When deciding resource consent applications for point source discharges of nitrogen, phosphorus, sediment and microbial pathogens to water or onto or into land, provide for the:

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

Policy 11: Application of Best Practicable Option and mitigation or offset of effects to point source discharges/Te Kaupapa Here 11: Te whakahāngai i te Kōwhiringa ka Tino Taea me ngā mahi whakangāwari pānga; te karo rānei i ngā pānga ki ngā rukenga i ngā pū tuwha

Require any person undertaking a point source discharge of nitrogen, phosphorus, sediment or microbial pathogens to water or onto or into land in the Waikato and Waipa River catchments to adopt the Best Practicable Option* to avoid or mitigate the adverse effects of the discharge, at the time a resource consent application is decided. Where it is not practicable to avoid or mitigate all adverse effects, an offset measure may be proposed in an alternative location or locations to the point source discharge, for the purpose of ensuring positive effects on the environment to lessen any residual adverse effects of the discharge(s) that will or may result from allowing the activity provided that the:

a. Primary discharge does not result in any significant toxic adverse effect at the point source discharge location; and
b. Offset measure is for the same contaminant; and
c. Offset measure occurs preferably within the same sub-catchment in which the primary discharge occurs and if this is not practicable, then within the same Freshwater Management Unit^ or a Freshwater Management Unit^ located upstream, and
d. Offset measure remains in place for the duration of the consent and is secured by consent condition.

Policy 12: Additional considerations for point source discharges in relation to water quality targets/Te Kaupapa Here 12: He take anō hei whakaaro ake mō ngā rukenga i ngā pū tuwha e pā ana ki ngā whāinga ā-kounga wai

Consider the contribution made by a point source discharge to the nitrogen, phosphorus, sediment and microbial pathogen catchment loads and the impact of that contribution on the likely achievement of the short term targets^ in Objective 3 or the progression towards the 80-year targets^ in Objective 1, taking into account:

a. The relative proportion of nitrogen, phosphorus, sediment or microbial pathogens that the particular point source discharge contributes to the catchment load; and
b. Past technology upgrades undertaken to model, monitor and reduce the discharge of nitrogen, phosphorus, sediment or microbial pathogens within the previous consent term; and
c. The ability to stage future mitigation actions to allow investment costs to be spread over time and meet the water quality targets^ specified above; and
d. The diminishing return on investment in treatment plant upgrades in respect of any resultant reduction in nitrogen, phosphorus, sediment or microbial pathogens when treatment plant processes are already achieving a high level of contaminant reduction through the application of the Best Practicable Option*.

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

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

a. A consent term exceeding 25 years, where the applicant demonstrates the approaches set out in Policies 11 and 12 will be met; and
b. The magnitude and significance of the investment made or proposed to be made in contaminant reduction measures and any resultant improvements in the receiving water quality; and

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

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

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

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

Protect and make progress towards restoration of Whangamarino Wetland by reducing the discharge of nitrogen, phosphorus, sediment and microbial pathogens in the sub-catchments that flow into the wetland to:

a. Reduce and minimise further loss of the bog ecosystem; and
b. Provide increasing availability of mahinga kai; and
c. Support implementation of any catchment plan prepared in future by Waikato Regional Council that covers Whangamarino Wetland.

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

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

a. The relationship of tangata whenua with their ancestral lands; and
b. The exercise of kaitiakitanga; and
c. The creation of positive economic, social and cultural benefits for tangata whenua now and into the future;

Taking into account:

i. Best management practice actions for nitrogen, phosphorus, sediment and microbial pathogens for the proposed new type of land use; and
ii. The suitability of the land for development into the proposed new type of land use, reflecting the principles for future allocation as contained in Policy 7, including the risk of contaminant discharge from that land and the sensitivity of the receiving water body; and
iii. The short term targets^ to be achieved in Objective 3.

Policy 17: Considering the wider context of the Vision and Strategy/Te Kaupapa Here 17: Te whakaaro ake ki te horopaki whānui o Te Ture Whaimana

When applying policies and methods in Chapter 3.11, seek opportunities to advance those matters in the Vision and Strategy and the values^ for the Waikato and Waipa Rivers that fall outside the scope of Chapter 3.11, but could be considered secondary benefits of methods carried out under this Chapter, including, but not limited to:

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

3.11.4 Implementation methods/Ngā tikanga whakatinana

3.11.4.1 Working with others/Te mahi tahi me ētehi atu

Waikato Regional Council will work with stakeholders including Waikato River iwi partners, Waikato River Authority, Waikato River Restoration Strategy partners, Department of Conservation, territorial authorities, industry and sector bodies, to implement Chapter 3.11 including all the following methods in 3.11.4. This will include coordinating priorities, funding and physical works, promoting awareness and providing education, to assist in giving effect to the Vision and Strategy for the Waikato River/Te Ture Whaimana o Te Awa o Waikato for the Waikato and Waipa Rivers.

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

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

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

3.11.4.3 Farm Environment Plans/Ngā Mahere Taiao ā-Pāmu

Waikato Regional Council will prepare parameters and minimum requirements for the development of a certification process for professionals to develop, certify and monitor Farm Environment Plans in a consistent approach across the region. A Farm Environment Plan will be prepared by a certified person as per the requirements outlined in Schedule 1, and will assess the risk of diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens and specify actions to reduce those risks in order to bring about reductions in the discharges of those contaminants. Waikato Regional Council will develop guidance for risk assessments, auditing and compiling Farm Environment Plans.

Waikato Regional Council will take a risk based approach to monitoring Farm Environment Plans, starting with more frequent monitoring and then moving to monitoring based on risk assessment. Robust third party audit (independent of the farmer and Certified Farm Environment Planner) and monitoring will be required.

3.11.4.4 Lakes and Whangamarino Wetland/Ngā Roto me ngā Repo o Whangamarino

Waikato Regional Council, working with others, will:

a. Build on the Shallow Lakes Management Plan by developing Lake Catchment Plans and investigate lake-specific options to improve water quality and ecosystem health, and manage pest species. In many instances, this may require an adaptive management approach.
b. Prepare and implement Lake Catchment Plans with community involvement which include:
    i. A vision for the lake developed in consultation with the community.

ii. Description of the desired state of lake and recognition of the challenges (e.g. costs) and opportunities (e.g. benefits) in achieving it.
iii. An evidence-based description of the problem (i.e. what is the gap between the current state and desired state) that recognises the presence of multiple stressors and uncertainty in responses and time frames.
iv. Community engagement in defining actions that will move the lake towards its desired state.
v. Responsibility for achieving the agreed actions and expected timeframes, developed in consultation with those who will be undertaking the work.
vi. A monitoring regime that will provide evidence of the implementation of the defined actions and any changes in the state of the lake.

c. As a priority, undertake the development and implementation of the Lake Waikare and Whangamarino Wetland Catchment Management Plan using the process set out in b).
d. Work towards managing the presence of pest weeds and fish in the shallow lakes and connected lowland rivers area, including Whangamarino Wetland.
e. Support research and testing of restoration tools and options to maintain and enhance the health of shallow lakes and Whangamarino Wetland (e.g. lake modelling, lake bed sediment treatments, constructed wetlands, floating wetlands, silt traps, pest fish management, and farm system management tools).
f. Support lake and Whangamarino Wetland restoration programmes including, but not limited to, advice, funding, and project management. Restoration programmes may have a wider scope than water quality, including hydrological restoration, revegetation and biodiversity restoration.
g. Develop a set of 10-year water quality attribute^ targets^ for each lake Freshwater Management Unit^.

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

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

a. Identify the causes of current water quality decline, identify cost-effective measures to bring about reductions in contaminant discharges, and coordinate the reductions required at a property, enterprise and sub-catchment scale (including recommendations for funding where there is a public benefit identified).
b. Align works and services to reduce nitrogen, phosphorus, sediment and microbial pathogen discharges including riparian management, targeted reforestation, constructed wetlands, sediment traps and sediment detention bunds.
c. Assess and determine effective and efficient placement of constructed wetlands at a sub-catchment scale to improve water quality.
d. Support research that addresses the management of wetlands, including development of techniques to monitor ecological change and forecasting evolution of wetland characteristics resulting from existing land use in the wetland catchments.
e. Integrate the regulatory requirements to fence waterways with the requirements for effective drainage scheme management.

f. Coordinate funding of mitigation work by those contributing to water quality degradation, in proportion to that contribution. g. Utilise public funds to support edge of field mitigations where those mitigations provide significant public benefit.

3.11.4.6 Funding and implementation/Te pūtea me te whakatinanatanga

Waikato Regional Council will:

a. Provide staff resources and leadership within the organisation for the implementation of Chapter 3.11.
b. Seek to secure funding for the implementation of Chapter 3.11 through the annual plan and long term plan processes.

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

Gather information and commission appropriate scientific research to inform any future framework for the allocation of diffuse discharges including:

a. Implementing processes that will support the setting of property or enterprise-level diffuse discharge limits in the future.
b. Researching:
    i. The quantum of contaminants that can be discharged at a sub-catchment and Freshwater Management Unit^ scale while meeting the Table 3.11-1 water quality attribute^ targets^. ii. Methods to categorise and define 'land suitability'.
    ii. Tools for measuring or modelling discharges from individual properties, enterprises and sub-catchments, and how this can be related to the Table 3.11-1 water quality attribute^ targets^.

3.11.4.8 Reviewing Chapter 3.11 and developing an allocation framework for the next Regional Plan/Te arotake i te Upoko 3.11, te whakarite hoki i tētehi anga toha mō te Mahere ā-Rohe e whai ake ana

Waikato Regional Council will:

a. Develop discharge allocation frameworks for individual properties and enterprises based on information collected under Method 3.11.4.7, taking into account the best available data, knowledge and technology at the time; and
b. Use this to inform future changes to the Waikato Regional Plan to manage discharges of nitrogen, phosphorus, sediment and microbial pathogens at a property or enterprise-level to meet the targets^ in the Objectives.

3.11.4.9 Managing the effects of urban development/Te whakahaere i ngā pānga o te whanaketanga ā-tāone

Waikato Regional Council will:

a. Continue to work with territorial authorities to implement the Waikato Regional Policy Statement set of principles that guide future development of the built environment which anticipates and addresses cumulative effects over the long term.
b. When undertaking sub-catchment scale planning under Method 3.11.4.5 in urban sub-catchments engage with urban communities to raise awareness of water quality issues, and to identify and implement effective solutions for the urban context.

3.11.4.10 Accounting system and monitoring/Te pūnaha kaute me te aroturuki

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

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

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

Waikato Regional Council will:

a. Review and report on the progress towards and achievement of the 80-year water quality objectives of Chapter 3.11.
b. Research and identify methods to measure actions at a sub-catchment, property and enterprise level, and their contribution to reductions in the discharge of contaminants.
c. Monitor the achievement of the values^ for the Waikato and Waipa Rivers and the uses made of those rivers.
d. Collate data on the number of land use resource consents issued under the rules of this chapter, the number of Farm Environment Plans completed, compliance with the actions listed in Farm Environment Plans, Nitrogen Reference Points for properties and enterprises, and nitrogen discharge data reported under Farm Environment Plans.
e. Work with industry to collate information on the functioning and success of any Certified Industry Scheme.

3.11.4.12 Support research and dissemination of best practice guidelines to reduce diffuse discharges/Te taunaki i te rangahautanga me te tuaritanga o ngā aratohu mō ngā mahi tino whai take hei whakaiti i ngā rukenga roha

Waikato Regional Council will:

a. Develop and disseminate best management practice guidelines for reducing the diffuse discharges of nitrogen, phosphorus, sediment and microbial pathogens; and
b. Support research into methods for reducing diffuse discharges of contaminants to water.

3.11.5 Rules/Ngā Ture

3.11.5.1 Permitted Activity Rule – Small and Low Intensity farming activities/Te Ture mō ngā Mahi e Whakaaetia ana – Ngā mahi iti, ngā mahi pāiti hoki i runga pāmu

Rule 3.11.5.1 - Permitted Activity Rule – Small and Low Intensity farming activities

The use of land for farming activities (excluding commercial vegetable production) and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a permitted activity subject to the following conditions:

a. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
b. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and

Either:

c. The property area is less than or equal to 4.1 hectares; and
d. The farming activities do not form part of an enterprise being undertaken on more than one property; or
e. Where the property area is greater than 4.1 hectares:
f. For grazed land, the stocking rate of the land is less than 6 stock units per hectare; and
g. No arable cropping occurs; and
h. The farming activities do not form part of an enterprise being undertaken on more than one property.

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

Rule 3.11.5.2 - Permitted Activity Rule – Other farming activities

The use of land for farming activities (excluding commercial vegetable production) and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water where the property area is greater than 4.1 hectares, and has more than 6 stock units per hectare or is used for arable cropping, is a permitted activity subject to the following conditions:

1. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
2. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C and Conditions 3(e) and 4(e) of this Rule; and
3. Where the property area is less than or equal to 20 hectares:

    a. The farming activities do not form part of an enterprise being undertaken on more than one property; and
    b. Where the land is:

        i. used for grazing livestock, the stocking rate of the land is no greater than the stocking rate of the land at 22 October 2016; or
        ii. not used for grazing livestock, the land use has the same or lower diffuse discharges of nitrogen, phosphorus, sediment or microbial pathogens as the land use at 22 October 2016; and

c. Upon request, the landowner shall obtain and provide to the Council independent verification from a Certified Farm Environment Planner that the use of land is compliant with either b)(i) or b)(ii) above; and
d. Upon request from the Council, a description of the current land use activities shall be provided to the Council; and
e. Where the property or enterprise contains any of the water bodies listed in Schedule C, new fences installed after 22 October 2016 must be located to ensure cattle, horses, deer and pigs cannot be within three metres of the bed of the water body (excluding constructed wetlands and drains).

4. Where the property or enterprise area is greater than 20 hectares:

a. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and
b. The diffuse discharge of nitrogen from the property or enterprise does not exceed either:

    i. the Nitrogen Reference Point; or
    ii. 15kg nitrogen/hectare/year; whichever is the lesser, over the whole property or enterprise when assessed in accordance with Schedule B; and

c. No part of the property or enterprise over 15 degrees slope is cultivated or grazed; and d. No winter forage crops are grazed in situ; and
d. Where the property or enterprise contains any of the water bodies listed in Schedule C:

    i. There shall be no cultivation within 5 metres of the bed of the water body; and
    ii. New fences installed after 22 October 2016 must be located to ensure cattle, horses, deer and pigs cannot be within three metres of the bed of the water body (excluding constructed wetlands and drains); and

5. For all properties greater than 4.1 hectares, from 31 March 2019, in addition to the requirements of Schedule A, the following information must be provided to the Waikato Regional Council by 1 September each year:

a. Annual stock numbers; and
b. Annual fertiliser use; and
c. Annual brought in animal feed.

3.11.5.3 Permitted Activity Rule – Farming activities with a Farm Environment Plan under a Certified Industry Scheme/Te Ture mō ngā Mahi e Whakaaetia ana – Ngā mahi i runga pāmu kua whai Mahere Taiao ā-Pāmu i raro i te Kaupapa ā-Ahumahi kua Whai Tohu

Rule 3.11.5.3 - Permitted Activity Rule – Farming activities with a Farm Environment Plan under a Certified Industry Scheme

Except as provided for in Rule 3.11.5.1 and Rule 3.11.5.2 the use of land for farming activities (excluding commercial vegetable production) where the land use is registered to a Certified Industry Scheme, and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a permitted activity subject to the following conditions:

1. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
2. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and
3. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and
4. The Certified Industry Scheme meets the criteria set out in Schedule 2 and has been approved by the Chief Executive Officer of Waikato Regional Council; and
5. A Farm Environment Plan which has been prepared in accordance with Schedule 1 and has been approved by a Certified Farm Environment Planner, is provided to the Waikato Regional Council as follows:

    a. By 1 July 2020 for properties or enterprises within Priority 1 sub-catchments listed in Table 3.11-2, and properties or enterprises with a Nitrogen Reference Point greater than the 75th percentile nitrogen leaching value;
    b. By 1 July 2023 for properties or enterprises within Priority 2 sub-catchments listed in Table 3.11-2;
    c. By 1 July 2026 for properties or enterprises within Priority 3 sub-catchments listed in Table 3.11-2; and

6. 6. The use of land shall be undertaken in accordance with the actions and timeframes specified in the Farm Environment Plan; and
7. 7. The Farm Environment Plan provided under Condition 5 may be amended in accordance with the procedure set out in Schedule 1 and the use of land shall thereafter be undertaken in accordance with the amended plan; and
8. 8. A copy of the Farm Environment Plan amended in accordance with condition (7) shall be provided to the Waikato Regional Council within 30 working days of the date of its amendment.

3.11.5.4 Controlled Activity Rule – Farming activities with a Farm Environment Plan not under a Certified Industry Scheme/Te Ture mō ngā Mahi ka āta Whakahaerehia – Ngā mahi i runga pāmu kua whai Mahere Taiao ā-Pāmu kāore i raro i te Kaupapa ā-Ahumahi kua Whai Tohu

Rule 3.11.5.4 - Controlled Activity Rule – Farming activities with a Farm Environment Plan not under a Certified Industry Scheme

Except as provided for in Rule 3.11.5.1 and Rule 3.11.5.2 the use of land for farming activities (excluding commercial vegetable production) where that land use is not registered to a Certified Industry Scheme, and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a permitted activity until:

1. 1 January 2020 for properties or enterprises in Priority 1 sub-catchments listed in Table 3.11-2, and properties or enterprises with a Nitrogen Reference Point greater than the 75th percentile nitrogen leaching value;
2. 1 January 2023 for properties or enterprises in Priority 2 sub-catchments listed in Table 3.11-2;
3. 1 January 2026 for properties or enterprises in Priority 3 sub-catchments listed in Table 3.11-2; Subject to the following conditions:
4. The property is registered with the Waikato Regional Council in conformance with Schedule A; and 5. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B; and After the dates set out in 1), 2) and 3) above the use of land shall be a controlled activity (requiring resource consent), subject to the following standards and terms:

a. A Farm Environment Plan has been prepared in conformance with Schedule 1 and has been approved by a Certified Farm Environment Planner, and is provided to the Waikato Regional Council at the time the resource consent application is lodged by the dates specified in I-III below; and
b. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
c. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B and is provided to the Waikato Regional Council at the time the resource consent application is lodged; and d. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i. The content of the Farm Environment Plan.
ii. The actions and timeframes for undertaking mitigation actions that maintain or reduce the diffuse discharge of nitrogen, phosphorus, sediment or microbial pathogens to water or to land where they may enter water.
iii. The actions, timeframes and other measures to ensure that the diffuse discharge of nitrogen from the property or enterprise, as measured by the five-year rolling average annual nitrogen loss as determined by the use of the current version of OVERSEER®, does not increase beyond the property or enterprise's Nitrogen Reference Point, unless other suitable mitigations are specified.
iv. Where the Nitrogen Reference Point exceeds the 75th percentile nitrogen leaching value, actions, timeframes and other measures to ensure the diffuse discharge of nitrogen is reduced so that it does not exceed the 75th percentile nitrogen leaching value by 1 July 2026.
v. The term of the resource consent.
vi. The monitoring, record keeping, reporting and information provision requirements for the holder of the resource consent to demonstrate and/or monitor compliance with the Farm Environment Plan.
vii. The timeframe and circumstances under which the consent conditions may be reviewed or the Farm Environment Plan shall be amended.
viii. Procedures for reviewing, amending and re-approving the Farm Environment Plan.

Dates:

i. For Priority 1 sub-catchments, and properties with a Nitrogen Reference Point of greater than 75th percentile nitrogen leaching value, by 1 July 2020
ii. For Priority 2 sub-catchments, by 1 July 2023
iii. For Priority 3 sub-catchments, by 1 July 2026

Notification:

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

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

Rule 3.11.5.5 - Controlled Activity Rule – Existing commercial vegetable production

The use of land for commercial vegetable production and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water, is a permitted activity until 1 January 2020, from which date it shall be a controlled activity (requiring resource consent) subject to the following standards and terms:

a. The property is registered with the Waikato Regional Council in conformance with Schedule A; and
b. A Nitrogen Reference Point is produced for the property or enterprise in conformance with Schedule B and provided to the Waikato Regional Council at the time the resource consent application is lodged; and
c. Cattle, horses, deer and pigs are excluded from water bodies in conformance with Schedule C; and
d. The land use is registered to a Certified Industry Scheme; and
e. The areas of land, and their locations broken down by sub-catchments [refer to Table 3.11-2], that were used for commercial vegetable production within the property or enterprise each year in the period 1 July 2006 to 30 June 2016, together with the maximum area of land used for commercial vegetable production within that period, shall be provided to the Council; and
f. The total area of land for which consent is sought for commercial vegetable production must not exceed the maximum land area of the property or enterprise that was used for commercial vegetable production during the period 1 July 2006 to 30 June 2016; and
g. Where new land is proposed to be used for commercial vegetable production, an equivalent area of land must be removed from commercial vegetable production in order to comply with standard and term f.; and
h. A Farm Environment Plan for the property or enterprise prepared in conformance with Schedule 1 and approved by a Certified Farm Environment Planner is provided to the Waikato Regional Council at the time the resource consent application is lodged.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i. The content of the Farm Environment Plan.
ii. The maximum area of land to be used for commercial vegetable production.
iii. The actions and timeframes for undertaking mitigation actions that maintain or reduce the diffuse discharge of nitrogen, phosphorus or sediment to water or to land where those contaminants may enter water, including provisions to manage the effects of land being retired from commercial vegetable production and provisions to achieve Policy 3(d).
iv. The actions and timeframes to ensure that the diffuse discharge of nitrogen does not increase beyond the Nitrogen Reference Point for the property or enterprise.
v. The term of the resource consent.
vi. The monitoring, record keeping, reporting and information provision requirements for the holder of the resource consent to demonstrate and/or monitor compliance with the Farm Environment Plan.
vii. The time frame and circumstances under which the consent conditions may be reviewed.
viii. Procedures for reviewing, amending and re-certifying the Farm Environment Plan.

Notification:

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

Advisory note: Under section 20A(2) of the RMA a consent must be applied for within 6 months of 1 January 2020, namely by 1 July 2020.

3.11.5.6 Restricted Discretionary Activity Rule – The use of land for farming activities/Te Ture mō ngā kōwhiringa mahi e herea ana – te whakamahinga o te whenua mō ngā mahinga pāmu

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

The use of land for farming activities that does not comply with the conditions, standard or terms of Rules 3.11.5.1 to 3.11.5.5 and the associated diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens onto or into land in circumstances which may result in those contaminants entering water is a restricted discretionary activity (requiring resource consent).

Waikato Regional Council restricts its discretion over the following matters:

i. Cumulative effects on water quality of the catchment of the Waikato and Waipa Rivers.
ii. The diffuse discharge of nitrogen, phosphorus, sediment and microbial pathogens.
iii. The need for and the content of a Farm Environment Plan.
iv. The term of the resource consent.
v. The monitoring, record keeping, reporting and information provision requirements for the holder of the resource consent.
vi. The time frame and circumstances under which the consent conditions may be reviewed.
vii. The matters addressed by Schedules A, B and C.

Notification:

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

3.11.5.7 Non-Complying Activity Rule – Land Use Change/Te Ture mō ngā mahi kāore e whai i ngā ture – Te Panonitanga ā-Whakamahinga Whenua

Rule 3.11.5.7 - Non-Complying Activity Rule – Land Use Change

Notwithstanding any other rule in this Plan, any of the following changes in the use of land from that which was occurring at 22 October 2016 within a property or enterprise located in the Waikato and Waipa catchments, where prior to 1 July 2026 the change exceeds a total of 4.1 hectares:

1. Woody vegetation to farming activities; or
2. Any livestock grazing other than dairy farming to dairy farming; or
3. Arable cropping to dairy farming; or
4. Any land use to commercial vegetable production except as provided for under standard and term g. of Rule 3.11.5.5 is a non-complying activity (requiring resource consent) until 1 July 2026.

Notification:

Consent applications will be considered without notification, and without the need to obtain written approval of affected persons, subject to the Council being satisfied that the loss of contaminants from the proposed land use will be lower than that from the existing land use.

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

Properties with an area greater than 2 hectares (excluding urban properties) must be registered with the Waikato Regional Council in the following manner:

1. Registration must occur between 1 September 2018 and 31 March 2019.
2. Registration information set out in clause 5, and where relevant in clause 6, below must be provided.
3. Proof of registration must be provided to the Waikato Regional Council if requested by the Council.
4. Registration information must be updated by the new owner of a property within 30 working days of the new owner taking possession of the property, or otherwise at the request of the Waikato Regional Council.
5. All property owners must provide:

    a. The following information in respect of the land owner, and the person responsible for using the land (if different from the land owner):

        i. Full name.
        ii. Trading name (if applicable, where the owner is a company or other entity).
        iii. Full postal and email address.
        iv. Telephone contact details.

    b. Legal description of the property as per the certificate(s) of title.
    c. Physical address of the property.
    d. A description of the land use activity or activities undertaken on the property as at 22 October 2016, including the land area of each activity.
    e. The total land area of the property.
    f. Where the land is used for grazing, the stocking rate of animals grazed on the land.

6. Properties that graze livestock must also provide a map showing:

    a. The location of:
        i. Property boundaries; and
        ii. Water bodies listed in Schedule C for stock exclusion within the property boundary and fences adjacent to those water bodies; and
        iii. Livestock crossing points over those water bodies and a description of any livestock crossing structures.

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

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

a. The Nitrogen Reference Point must be calculated by a Certified Farm Nutrient Advisor to determine the amount of nitrogen being leached from the property or enterprise during the relevant reference period specified in clause f), except for any land use change approved under Rule 3.11.5.7 where the Nitrogen Reference Point shall be determined through the Rule 3.11.5.7 consent process.
b. The Nitrogen Reference Point shall be the highest annual nitrogen leaching loss that occurred during a single year (being 12 consecutive months) within the reference period specified in clause f), except for commercial vegetable production in which case the Nitrogen Reference Point shall be the average annual nitrogen leaching loss during the reference period.
c. The Nitrogen Reference Point must be calculated using the current version of the OVERSEER® Model (or any other model approved by the Chief Executive of the Waikato Regional Council).
d. The Nitrogen Reference Point data shall comprise the electronic output file from the OVERSEER® or other approved model, and where the OVERSEER® Model is used, it must be calculated using the OVERSEER® Best Practice Data Input Standards 2016, with the exceptions and inclusions set out in Schedule B Table 1.
e. The Nitrogen Reference Point and the Nitrogen Reference Point data must be provided to Waikato Regional Council within the period 1 September 2018 to 31 March 2019.
f. The reference period is the two financial years covering 2014/2015 and 2015/2016, except for commercial vegetable production in which case the reference period is 1 July 2006 to 30 June 2016.
g. The following records (where relevant to the land use undertaken on the property or enterprise) must be retained and provided to Waikato Regional Council at its request:
    i. Stock numbers as recorded in annual accounts together with stock sale and purchase invoices;
    ii. Dairy production data;
    iii. Invoices for fertiliser applied to the land;
    iv. Invoices for feed supplements sold or purchased;
    v. Water use records for irrigation (to be averaged over 3 years or longer) in order to determine irrigation application rates;
    vi. Crops grown on the land; and
    vii. Horticulture crop diaries and NZGAP records.

Table 1: Data input methodology for ensuring consistency of Nitrogen Reference Point data using the OVERSEER® Model Explanatory note Setting that must be used OVERSEER® Parameter

OVERSEER ® Parameter	**Setting that must be used**	**Explanatory note**
Farm model Pastoral and horticulture	To cover the entire enterprise including riparian, retired, forestry, and yards and races. The model is to include non-contiguous properties that are part of the enterprise that are in the same sub-catchment. If the farm (for example where dairy animals are grazed or wintered) is part of another farming business such as a drystock farm, the	To capture the "whole farm" in one Overseer ® file, where possible, to truly represent nitrogen losses from farm in the catchment area.

	losses from those animals will be represented in the drystock farm's Overseer model	
Location Pastoral and horticulture	Select Waikato Region	This setting has an effect on climate settings and some animal characteristics and is required to ensure consistency
Animal distribution – relative productivity pastoral only	Use "no differences between blocks" with the following exceptions: Grazed pines or other woody vegetation. In this case use "Relative yield" and set the grazed pine blocks to 0.4 (40%). Where the farm has a mixture of irrigated and non-irrigated areas. In this case use "Relative yield" and set the irrigated area to 1 (100%), and the non-irrigated areas to 0.75 (75%).	
Wetlands	Entered as Riparian Blocks	As per the 2016 OVERSEER® Best Practice Data Input Standards
Stock number entry	Based on specific stock numbers only	To ensure consistency and accuracy of stock number inputs
Animal weights	Only use OVERSEER® defaults – do not enter in weights and use the age at start setting where available (national averages).	Accurate animal weights are difficult to obtain and prove.
Block climate data	Only use the Climate Station tool For contiguous blocks use the coordinates from the location of the dairy shed or the middle of the farm area (for non-dairy). For non-contiguous blocks use individual blocks' climate station coordinates.	
Soil description	Use Soil Order – obtained from S-Map or where S-Map is unavailable from LRI 1:50,000 data or a soil map of the farm.	To ensure consistency between areas of the region that have S-Map data and those that don't.
Missing data	In the absence of Nitrogen Referencing information being provided the Waikato	Some farms will not be able to supply data, therefore a

	Regional Council will use appropriate default numbers for any necessary inputs to the OVERSEER ® model (such default numbers will generally be around 75% of normal Freshwater Management Unit^ average values for those inputs).	default must be established.

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

Except as provided by Exclusions I. and II., stock must be excluded from the water bodies listed in i. to iv. below as follows:

a. The water bodies must be fenced to exclude cattle, horses, deer and pigs, unless those animals are prevented from entering the bed of the water body by a stock proof natural barrier formed by topography or vegetation.
b. New fences installed after 22 October 2016 must be located to ensure cattle, horses, deer and pigs cannot be within one metre of the bed of the water body (excluding constructed wetlands).
c. Livestock must not be permitted to enter onto or pass across the bed of the water body, except when using a livestock crossing structure.
d. For land use authorised under Rules 3.11.5.1 or 3.11.5.2, clauses 1 and 2 must be complied with:
    i. By 1 July 2023 for properties and enterprises within Priority 1 sub-catchments listed in Table 3.11-2.
    ii. By 1 July 2026 for properties and enterprises within Priority 2 and Priority 3 sub-catchments listed in Table 3.11-2.
e. For land use authorised under Rules 3.11.5.3, 3.11.5.4 or 3.11.5.5, clauses 1 and 2 must be complied with by the date and in the manner specified in the property's or enterprise's Farm Environment Plan, which shall be within 3 years following the dates by which a Farm Environment Plan must be provided to the Council, or in any case no later than 1 July 2026.

Water bodies from which cattle, horses, deer and pigs must be excluded:

i. Any river that continually contains surface water.
ii. Any drain that continually contains surface water.
iii. Any wetland, including a constructed wetland.
iv. Any lake.

Exclusions:

The following situations are excluded from clauses 1 and 2:

i. Where the entry onto or passing across the bed of the water body is by horses that are being ridden or led.
ii. Where the entry onto or passing across the bed of the water body is by a feral animal.

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

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

The Farm Environment Plan shall identify all sources of sediment, nitrogen, phosphorus and microbial pathogens, and identify actions, and timeframes for those actions to be completed, in order to reduce the diffuse discharges of these contaminants.
The Farm Environment Plan must clearly identify how specified minimum standards will be complied with.

The requirements set out in A apply to all Farm Environment Plans, including those prepared within a Certified Industry Scheme.
This schedule applies to all farming activities, but it is acknowledged that some provisions will not be relevant to every farming activity.

A. Farm Environment Plans shall contain as a minimum:

1. The property or enterprise details:

a. Full name, address and contact details (including email addresses and telephone numbers) of the person responsible for the property or enterprise.
b. Trading name (if applicable, where the owner is a company or other entity).
c. A list of land parcels which constitute the property or enterprise:
    i. the physical address and ownership of each parcel of land (if different from the person responsible for the property or enterprise) and any relevant farm identifiers such as the dairy supply number, Agribase identification number, valuation reference; and
    ii. The legal description of each parcel of land.

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

d. A description of where and how stock shall be excluded from water bodies for stock exclusion including:
    i. the provision of fencing and livestock crossing structures to achieve compliance with Schedule C; and
    ii. For areas with a slope exceeding 25^{o} and where stream fencing is impracticable, the provision of alternative mitigation measures.

e. A description of setbacks and riparian management, including:
    i. The management of water body margins including how damage to the bed and margins of water bodies, and the direct input of contaminants will be avoided, and how riparian margin settling and filtering will be provided for; and
    ii. Where practicable the provision of minimum grazing setbacks from water bodies for stock exclusion of 1 metre for land with a slope of less than 15^{o} and 3 metres for land with a slope between 15^{o} and 25^{o} ; and

iii. The provision of minimum cultivation setbacks of 5 metres.

f. A description of the critical source areas from which sediment, nitrogen, phosphorus and microbial pathogens are lost, including:
   i. the identification of intermittent waterways, overland flow paths and areas prone to flooding and ponding, and an assessment of opportunities to minimise losses from these areas through appropriate stocking policy, stock exclusion and/or measures to detain floodwaters and settle out or otherwise remove sediment, nitrogen, phosphorus and microbial pathogens (e.g. detention bunds, sediment traps, natural and constructed wetlands); and
   ii. the identification of actively eroding areas, erosion prone areas, and areas of bare soil and appropriate measures for erosion and sediment control and re-vegetation; and
   iii. an assessment of the risk of diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens from tracks and races and livestock crossing structures to waterways, and the identification of appropriate measures to minimise these discharges (e.g. cut-off drains, and shaping); and
   iv. the identification of areas where effluent accumulates including yards, races, livestock crossing structures, underpasses, stock camps, and feed-out areas, and appropriate measures to minimise the risk of diffuse discharges of contaminants from these areas to groundwater or surface water; and
   v. the identification of other 'hotspots' such as fertiliser, silage, compost, or effluent storage facilities, wash-water facilities, offal or refuse disposal pits, and feeding or stock holding areas, and the appropriate measures to minimise the risk of diffuse discharges of contaminants from these areas to groundwater or surface water.

g. An assessment of appropriate land use and grazing management for specific areas on the farm in order to maintain and improve the physical and biological condition of soils and minimise the diffuse discharge of sediment, nitrogen, phosphorus and microbial pathogens to water bodies, including:
   i. matching land use to land capability; and
   ii. identifying areas not suitable for grazing; and
   iii. stocking policy to maintain soil condition and pasture cover; and
   iv. the appropriate location and management of winter forage crops; and
   v. suitable management practices for strip grazing.

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

i. A description of cultivation management, including:
   i. The identification of slopes over 15^{o} and how cultivation on them will be avoided; unless contaminant discharges to water bodies from that cultivation can be avoided; and
   ii. How the adverse effects of cultivation on slopes of less than 15^{o} will be mitigated through appropriate erosion and sediment controls for each paddock that will be cultivated including by:
      a. assessing where overland flows enters and exits the paddock in rainfall events; and

b. identifying appropriate measures to divert overland flows from entering the cultivated paddock; and
c. identifying measures to trap sediment leaving the cultivated paddock in overland flows; and
d. Maintaining appropriate buffers between cultivated areas and water bodies (minimum 5m setback).
e. A description of collected animal effluent management including how the risks associated with the operation of effluent systems will be managed to minimise contaminant discharges to groundwater or surface water.
f. A description of freshwater irrigation management including how contaminant loss arising from the irrigation system to groundwater or surface water will be minimised.

3 . A spatial risk map(s) at a scale that clearly shows:

a. The boundaries of the property; and
b. The locations of the main land uses [(6)] that occur on the property; and
c. The locations of existing and future mitigation actions to manage contaminant diffuse discharges; and

(6) For dairy farms this might be the OVERSEER® blocks, for drystock farms this might be Land Use Capability blocks.

d. Any relevant internal property boundaries that relate to risks and mitigation actions described in this plan; and
e. The location of continually flowing rivers, streams, and drains and permanent lakes, ponds and wetlands; and
f. The location of riparian vegetation and fences adjacent to water bodies; and;
g. The location of critical source areas for contaminants, as identified in 2 (c) above.

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

5. A description of the following:

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

Vegetable growing minimum standards

Farm environment plans required under Rule 3.11.5.5 shall, in addition to the matters set out above, ensure the following matters are addressed.

No	Contaminant	Vegetable growing minimum standards
1	Nitrogen, Phosphorus	Annual soil testing regime, fertiliser recommendations by block and by crop
2	Nitrogen, Phosphorus	Tailored fertiliser plans by block and by crop
3	Nitrogen, Phosphorus	Both (1) and (2) prepared by an appropriately qualified person
4	Nitrogen, Phosphorus	Annual calibration of fertiliser delivering systems through an approved programme such as Spreadmark/Fertspread
5	Soil/Phosphorus	As a minimum by block: an approved erosion and sediment control plan constructed in accordance with the Erosion and Sediment Control Guidelines for Vegetable Production June 2014
6	Nitrogen, Phosphorus	Documentation available for proof of fertiliser placement according to recommended instruction
7	Nitrogen, Phosphorus	Adoption and use of improved fertiliser products proved effective and available such as formulated prills, coatings and slow release mechanisms
8	Nitrogen, Phosphorus	Evidence available to demonstrate split applications by block/crop following expert approved practice relating to: ○ form of fertiliser applied ○ rate of application ○ placement of fertiliser ○ timing of application

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

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

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

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

Assessment Criteria

A. Certified Industry Scheme System

The application must demonstrate that the Certified Industry Scheme:

1. Is consistent with:
    a. the achievement of the water quality targets referred to in Objective 3; and

b. the purposes of Policy 2 or 3; and
c. The requirements of Rules 3.11.5.3 and 3.11.5.5.

2. Has an appropriate ownership structure, governance arrangements and management.
3. Has documented systems, processes, and procedures to ensure:

    a. Competent and consistent performance in Farm Environment Plan preparation and audit.
    b. Effective internal monitoring of performance.
    c. Robust data management.
    d. Timely provision of suitable quality data to Waikato Regional Council.
    e. Timely and appropriate reporting.
    f. Corrective actions will be implemented and escalated where required, including escalation to Waikato Regional Council if internal escalation is not successful.
    g. Internal quality control.
    h. The responsibilities of all parties to the Certified Industry Scheme are clearly stated.
    i. An accurate and up to date register of scheme membership is maintained.
    j. Transparency and public accountability of Certified Industry Schemes
    k. The articles of the scheme are available for public viewing.

B. People

The application must demonstrate that:

1. Those generating and auditing Farm Environment Plans are suitably qualified and experienced.
2. Auditing of Farm Environment plan requirements is independent of the Farm Environment Plan preparation and approval.

C. Farm Environment Plans

The application must demonstrate that Farm Environment Plans are prepared in conformance with Schedule 1.