

# **SUBMISSION ON** Draft Environmental Outcomes

30 November 2023

**To:** Tasman District Council

**Name of Submitter:** Horticulture New Zealand

**Supported by:** Potatoes NZ, Vegetables New Zealand Inc, New Zealand Boysenberry Council, Waimea Water Ltd, NZ Kiwifruit Growers Inc,

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# OVERVIEW

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## Our submission

Horticulture New Zealand (HortNZ) thanks Tasman District Council for the opportunity to submit on the draft environmental outcomes and welcomes any opportunity to continue to work with Tasman District Council and to discuss our submission.

HortNZ could not gain an advantage in trade competition through this submission.

HortNZ wishes to be heard in support of our submission and would be prepared to consider presenting our submission in a joint case with others making a similar submission at any hearing.

The details of HortNZ's submission and decisions we are seeking are set out in our submission below.

# HortNZ's Role

## Background to HortNZ

HortNZ represents the interests of approximately 4,200 commercial fruit and vegetable growers in New Zealand who grow around 100 different fruits, and vegetables. The horticultural sector provides over 40,000 jobs.

There is approximately, 80,000 hectares of land in New Zealand producing fruit and vegetables for domestic consumers and supplying our global trading partners with high quality food.

It is not just the direct economic benefits associated with horticultural production that are important. Horticulture production provides a platform for long term prosperity for communities, supports the growth of knowledge-intensive agri-tech and suppliers along the supply chain; and plays a key role in helping to achieve New Zealand's climate change objectives.

The horticulture sector plays an important role in food security for New Zealanders. Over 80% of vegetables grown are for the domestic market and many varieties of fruits are grown to serve the domestic market.

HortNZ's purpose is to create an enduring environment where growers prosper. This is done through enabling, promoting and advocating for growers in New Zealand.



## HortNZ's Resource Management Act 1991 Involvement

On behalf of its grower members HortNZ takes a detailed involvement in resource management planning processes around New Zealand. HortNZ works to raise growers' awareness of the Resource Management Act 1991 (RMA) to ensure effective grower involvement under the Act.



# Executive Summary

## Overview

Horticulture is an important industry in the Tasman Region. There are two prominent and distinct subsets. Orcharding (largely of pipfruit crops) and commercial vegetable production on the Waimea Plains.

Each subset has its own specific needs and pressures.

### **Draft visions**

It is important that freshwater for horticultural needs is included in the draft visions for FMU with horticulture. Horticulture supports the overall health of the population as well as is an important industry in areas such as Tasman.

### **Draft Environmental outcomes**

HortNZ would like to see greater emphasis on water for irrigation, cultivation, growing and post-harvest treatment of horticultural crops, and crops that are for human consumption. The current outcomes place an equal focus on water for a wide range of farming and irrigation purposes which does not distinguish the importance of providing water for crops that support human health.

# Submission

## 1 Horticulture in Tasman-Nelson

There are over 50 different horticultural crops grown in the Tasman-Nelson area. Freshfacts<sup>1</sup>, published annually since 1999 by Plant & Food Research, provides a year-by-year report on horticulture in New Zealand. This is based on the Statistics New Zealand Agricultural Production Census with most recent data to 2017. The next Agricultural Production Census was held in July 2022 and is expected to be released early 2023. The survey gathers information about farms, fields, orchards, and forests to identify trends and provide current statistics that benefit the agricultural sector, inform decision-makers, and measure New Zealand's growth.

Planted crop areas for Nelson-Tasman area are captured in Tables 1-3 below. These figures are based on the 2017 census. The 2023 Freshfacts publication does not contain regional breakdowns for all crops.

Table 1: Area planted fruit (hectares)

Apples	Kiwifruit	Summerfruit	Avocados	Citrus	Berryfruit	Nuts	Olives	Other sub-tropical	Other fruit
2400	440	34	8	7	323	28	72	178	34

Table 2: Area planted vegetables hectare

Asparagus	Broccoli, cab & caulis	Carrots	Peas & beans	Lettuces	Onions	Potatoes	Squash	Sweet corn	Other veg	TOTAL Veg
2	292	13	6	136	46	9	1	32	490	1027

Table 3: Indoor crops (m2; 000's)

Capsicum	Salad greens	Tomatoes	Other veg & herbs	TOTAL Indoor
27	13	93	10	143

### 1.1 Horticulture in Tasman

Tasman is a horticulturally diverse region; it is a hub for both fruit and vegetable growing. Horticulture occurs over many of the proposed FMU's. While many types of horticultural

<sup>1</sup> [Fresh Facts](#)

production are found across the region, there has been a trend towards hubs or areas with some predominant types of production. For example, the Waimea Plains is associated with vegetable production, and Riwaka and Motueka are associated with pipfruit and hops production. Currently there are about 1500 ha of hops grown in the Tasman region, and this is a growing industry. While hops as a crop are not formally represented by Horticulture NZ, they are horticulture-aligned.

### 1.1.1 CLIMATE AND SOILS

The Nelson-Tasman area has a high annual average of growing-degree day totals<sup>2</sup>, with over 2700 in the Nelson - Motueka area.<sup>3</sup> Tasman also has a high number of sunshine hours enabling close to year-round production in some crops and locations.<sup>4</sup>

Some soil types on the Waimea Plains are highly productive and best suited for horticulture. For example, the Ranzau soils are stony and free draining. Due to their stoniness, they maintain higher temperatures even in colder months for winter crops and allow machinery on the ground for a greater period of the year, hence their suitability for crops like outdoor vegetables, pipfruit and grapes. The natural free draining and low water holding capacity also makes the Ranzau soils vulnerable to leaching. By contrast, the Waimea soils, are heavier with a higher water holding capacity are suited to hops, grape, pipfruit and summer commercial vegetable production. However, they can become waterlogged limiting winter crop suitability<sup>5</sup>.

### 1.1.2 VEGETABLE GROWING

Commercial vegetable production predominantly occurs on the Waimea Plains. Including greenhouse production, Tasman is the second largest vegetable production area in the South Island<sup>6</sup>. The stony soils and unique microclimates in the Waimea plains provide opportunities for vegetable production in cooler winter months.

Vegetables grown here are important to the South Island's domestic food supply. The heat of the Ranzau soils is particularly important for winter vegetable supply. Vegetable production on the Waimea plains helps to even out supplies of fresh vegetables in the domestic market across the year, particularly in the South Island where location, climate and sunshine hours makes this challenging in other areas. There are likely to be cost impacts for South Island supply if vegetable production was constrained on these Ranzau soils.

Growers vary in scale, from small family operations to large scale commercial organisations. Tasman's horticultural operations provide a range of employment and lifestyle opportunities to the local community. There are also a large number of horticultural support services and industries based within the Tasman region that rely on the various horticultural businesses.

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<sup>2</sup> Growing Degree Day total - The departure of mean daily temperature above a base temperature which has been found to be critical to the growth or development of a particular plant is a measure of the plant's development on that day

<sup>3</sup> [NIWAsts71.pdf](#)

<sup>4</sup> [NIWAsts71.pdf](#)

<sup>5</sup> Fenemor, A, 2020. Waimea Nitrates Science Review. Prepared for Tasman District Council. Available on TDC website ([Waimea Catchments nitrate overview | Tasman District Council](#))

<sup>6</sup> <https://freshfacts.co.nz/files/freshfacts-2021.pdf>

### 1.1.3 FRUIT GROWING

Tasman is the second largest pipfruit production area in New Zealand<sup>7</sup>, and a hub for South Island pipfruit production.

Pipfruit grown in other areas in the South Island is picked and transported to Nelson to be prepared and packaged for sale through Tasman based post-harvest facilities. Packhouses, post-harvest facilities and specialist advisory support services are all based in the region.

Kiwifruit, the second biggest fruit crop in the region, enjoys the sunny climate, although there has been significant damage in recent years due to adverse weather such as hailstorms.

### 1.1.4 WAIMEA DAM DEVELOPMENT

The Waimea dam is a joint venture co-funded by shareholders Tasman District Council (TDC) and Waimea Irrigators Ltd.<sup>8</sup> The beneficiaries of the dam are urban water users, irrigators and the river itself. In terms of freshwater values and addressing future needs based on river health, the project is progressive and a good example of local authorities working with local community and industry to provide a long-term solution for water availability.

The dam was created to address the future health needs of the river and ensure water availability for both urban users and irrigators<sup>9</sup>. The health of the river was a key driver for the development of the dam<sup>10</sup>. TDC also recognised there was need for water storage as water security was an issue for both urban users and irrigators and needed to be addressed for the long-term benefit of the Waimea community and river.<sup>11</sup>

The Waimea dam has enabled urban residential development in the Richmond area, Mapua and Brightwater, helping to increase urban expansion. It was recognised that urban water requirements were smaller than those of irrigators, but there was a greater need to address urban water issues and constraints.

The dam was also created to support the ongoing productive capacity of highly productive land. The National Policy Statement for Highly Productive Land (NPS-HPL) guides Councils on how to provide for HPL, ensuring the availability of these favourable soils for primary production, particularly horticulture, now and into the future. Access to secure and reliable irrigation water is fundamental to unlocking the productive capacity of highly productive land (HPL). The Waimea Dam enables the development and diversification of horticulture into higher value crops and growing systems. Alternative growing systems, such as hydroponic production, have notably lower environmental impacts and lower water requirements for the production outputs. The dam has enabled confidence to invest into these systems, whereas previously water availability and reliability through the practice of restrictions created too much uncertainty for investors to commit to higher value or higher capital growing systems.

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<sup>7</sup> [freshfacts-2021.pdf](#)

<sup>8</sup> [Funding the dam - Waimea Water](#)

<sup>9</sup> [Regional economic drivers - Waimea Water](#)

<sup>10</sup> [River health - Waimea Water](#)

<sup>11</sup> [The Waimea Community Dam - Waimea Water](#)

HortNZ is aware that water availability and security is likely to be an issue in other FMU's in Tasman. The Waimea Dam project is a good example of local authorities and local industry community working together to find long-term solutions to meet the needs of the rivers, community and industry.

## **1. National issues and the Tasman productive region's role**

### **1.1. Food security**

Domestic food security is a nationally important issue which needs to be addressed at a strategic level with sufficient recognition in regional planning. Access to secure and reliable highly productive soils and freshwater across growing regions in New Zealand is critical to domestic food security.

New Zealand's domestic food security remains vulnerable. In 2022, Statistics New Zealand reported annual food prices rose 6.8 percent in February 2022 compared with February 2021. This was the largest annual increase since July 2011 when prices increased 7.9 percent. Fruits and vegetables were the largest contributor to the annual movement, with prices increasing by 17 percent<sup>12</sup>. There are several contributing factors, including adverse weather events, labour shortages, increased costs in compliance, increased costs of horticultural supplies as well as freight and energy costs<sup>13</sup>.

The increase of energy costs directly impacts the cost of production in New Zealand fresh produce. Consumers are price driven, and the consequence of high production and therefore produce costs is that retailers will look to importing produce or substitutes to meet consumer expectations of price. Some fresh products cannot be imported, as they will not survive the journey and, due to the cost of freight, become cost-prohibitive to consumers. Importing fresh fruit and vegetables produced in other countries that can otherwise be grown in New Zealand increases carbon leakage due to freight and supports less climate-friendly growing and environmental practices in other countries.

We have a national food producing system that relies on growing vegetables and fruit in pockets of HPL across the country, with good climate and soils, and reliable access to freshwater. Growing the same crops on HPL in different parts of the country is important for food security. It creates a longer growing window to maintain supply, and if one or more growing areas are impacted by adverse weather, production can be increased in other areas to address domestic shortages.

#### **1.1.1. WEATHER EVENTS, AND THE IMPACT ON DOMESTIC FOOD SUPPLY**

Vulnerabilities in our domestic food supply network have been highlighted during recent weather events. The availability of fresh New Zealand-grown produce was affected by the

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<sup>12</sup> [Fruit and vegetables drive up annual food prices | Stats NZ](#)

<sup>13</sup> [Food prices are up, but the cost to grow it has skyrocketed | Stuff.co.nz](#)



recent rain events,<sup>14</sup> and Cyclone Gabrielle caused damage to key horticultural growing areas such as Pukekohe, Northland, Gisborne and Hawkes Bay<sup>15</sup>.

The timing of these events also increased the scale of impact, as many seasonal crops were in their harvest period. Considerable investment into growing the crop was lost, along with the product. There were flow-on impacts to employment and mental well-being. This highlights the need to ensure our domestic vegetable production is maintained over a wider range of locations to ensure that production and supply can continue.

The recovery in some areas from these events is likely to be long and will affect the ongoing supply of fresh fruit and vegetables vulnerable during this recovery. The Pukekohe and South Auckland production areas were also impacted by the 2023 Auckland Anniversary rain event which occurred just prior to Cyclone Gabrielle. All of these events placed more pressure on relatively unaffected areas to try and fill the supply gap. Consumers experienced product shortages and significant pricing fluctuations, and growers in less impacted areas faced pressure to supply a much greater area of the country for a lengthy period while affected areas recover.

### **1.1.2. ADAPTING TO A CHANGING CLIMATE**

The climate and warmer stony soils of the Tasman area provide the ability to produce vegetables for the domestic market year-round. In the South Island, this is an important function as the further south you go, the cooler the temperatures get and the less ability there is to produce crops year-round. This is because the number of growing degree days (GDD) decreases.

With climate change, the Tasman area is projected to become warmer and have a significant increase in the number of GDD, particularly in productive areas such as the Waimea Plains<sup>16</sup>. A warmer climate will likely mean some subsets of horticulture will become more able to thrive, and others with chilling requirements in their growth cycle are more likely to establish and grow in areas that retain a chill factor into the future.

Generally, there will likely be more significant weather events that can cause disruption in different locations across New Zealand. It is important to retain a diverse geographic spread and ability to grow produce for domestic consumption to reduce the risk of supply shocks and ensure there is fresh healthy produce available to feed the population.

### **1.1.3. NATIONAL DIRECTION AND SUPPORT FOR HORTICULTURE**

The Government has given national direction aimed at protecting domestic food security, via the following three pathways.

The National Policy Statement for Highly Productive Land (NPS HPL) came into effect October 2022 and provides a clear direction about how to preserve productive land, of which horticulture is reliant.

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<sup>14</sup> [Auckland storm event 9 May 2023 rapid analysis \(knowledgeauckland.org.nz\)](https://www.knowledgeauckland.org.nz/)

<sup>15</sup> [Cyclone Gabrielle's impact on the New Zealand economy and exports - March 2023 | New Zealand Ministry of Foreign Affairs and Trade \(mfat.govt.nz\)](https://www.mfat.govt.nz/en/news-and-media/news-releases/2023/03/cyclone-gabrielle-s-impact-on-the-new-zealand-economy-and-exports-march-2023/)

<sup>16</sup> [NIWA Client report](#)

Minister Parker’s letter to Regional Council sent in April 2023 seeking a report on how each council is providing for crop rotation vegetable growing at the FMU scale in NPSFM plans.

The recently released National and Built Environment Act provided direction on enabling supply of fresh fruit and vegetables<sup>17</sup>. While this legislation is likely to be repealed, the recognition of the vulnerability to our domestic food supply and the role of horticulture in supporting the health needs of the population is unchanged.

In addition, the Aotearoa Horticulture Action Plan<sup>18</sup> seeks to provide a framework to grow the value of the horticulture industry to \$12 billion by 2035<sup>19</sup>. This is a ‘quadruple helix’ strategy that involves a combination of effort between industry, government, Māori and growers.

While we are in a time of post-election transition, HortNZ believes there is clear support for the horticulture industry and ensuring domestic food supply is provided for when developing the NPSFM 2020 plans.

Social and economic impacts assessments will provide Council and community with understanding of how proposed catchment visions and limits will impact rural production and the wider community. It is important to understand how the different industries will be affected i.e. the dairy sector will be impacted differently from the extensive pastoral sector and then again from horticulture. Even within horticulture, the different subsets will be impacted in very different ways.

There are many ways to achieve freshwater visions. HortNZ advocates for the following approaches:

- values based
- multi-contaminant
- whole of catchment
- use of freshwater farm plans (FWFPs)
- social and economic impact assessments of proposed visions and limits.

Rules need to provide structure and guidance on addressing environmental concerns. It is more effective to have flexibility to ensure rules are able to be implemented and focused on achieving the desired environmental outcomes while activities occur. The same rule for everyone does not necessarily create good plans.

#### **1.1.4. TE MANA O TE WAI**

Te Mana o te Wai is a framework that provides a hierarchy of obligations to guide the way we manage our freshwater resources in the future. The first priority is to the health of the

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<sup>17</sup> [404 Not Found - New Zealand Parliament \(www.parliament.nz\)](http://www.parliament.nz)

<sup>18</sup> [Horticulture-Action-Plan \(hortnz.co.nz\)](http://hortnz.co.nz)

<sup>19</sup> [Growing together 2035 - Aotearoa Horticulture Action Plan \(February 2023\) \(mpi.govt.nz\)](https://www.mpi.govt.nz/growing-together-2035)

river, the second is to provide for the health needs of the people, and the third priority is to all other uses.

It is important to recognise the life supporting capacity and purpose of freshwater for sustaining communities. Populations have always thrived and centred in areas where there is access to freshwater. Freshwater has long been used to grow crops to feed populations. A healthy waterway will in turn support populations to thrive.

This framework applies to the whole plan development process, not just setting the environmental outcomes or drafting of visions. Te Mana o te Wai also applies to limits and how they are designed, as well as the impacts of these on communities and iwi.

HortNZ believes it is important to enable the community to revisit choices made earlier in the process. As more information becomes available about the state of freshwater in Tasman and the consequences and trade-offs of action, the community may choose to re-evaluate levels of ambition, time frames and comfort levels.

## **2. Freshwater and Horticulture**

The next generation regional freshwater Plans being developed have a greater awareness of the impacts of freshwater use and quality as a result of activities. A good plan will evaluate the community needs and values, the fabric and characteristics of the area, inclusive of cultural, environmental and economic requirements, as well as the current state of freshwater. This will then inform the plan, so it provides direction and guidance on how to achieve freshwater goals while ensuring communities are able to live, work and enjoy life in an area. A good plan balances needs of community with needs of freshwater resources and recognises the freshwater resource's ability to support communities within their limits.

Water is used throughout the horticultural production process; from growing the crops, washing, and processing produce for market, to fighting frosts (some fruits). Post-harvest water requirements are equally important to the production of fruit and vegetables for direct human consumption. To service these activities, the industry requires enough water supply with greater reliability, particularly in summer.

For some crops, such as vegetables that are grown above ground and fruit with skins that may be eaten, the quality of the irrigation water is important to manage food safety risks.

### **2.1. Discharges**

All farming activities result in discharges, mainly non-point source discharges from leaching or runoff. Non-point discharges can be minimised through good water, soil and nutrient management practices in a freshwater farm plan (FWFP).

Horticulture New Zealand has been supporting fruit and vegetable growers on the Waimea Plains to develop audited and certified FWFPs. Growers are completing their plans using

the Environment Management System (EMS) add-on to the NZ GAP industry assurance scheme<sup>20</sup>.

There are over 30 growing businesses on the Waimea plains with five or more hectares of horticultural land. There are 3100ha of land held by shareholders affiliated with Waimea Irrigators, there is approximately 225 shareholders. Approximately 2,400 hectares of owned and leased land on the Waimea Plains is captured by the EMS add-on. Most of the land is in horticulture, and a small proportion includes other land uses.

By using the EMS add-on, growers can demonstrate how they are implementing the industry environmental codes of practice and guidance to manage erosion and sediment loss, nutrient (nitrogen and phosphorous) losses, and maintain sustainable irrigation practices.

## **2.2. Abstractions**

The reliability of water supply for crops during growth periods is very important to ensure quality as well as yield of each crop. During dry periods, access to reliable water at specific times in a crop's growth cycle is essential to sustaining crop yields and maintaining quality and quantity of supply required by the market. Over irrigating can be just as harmful to crop yields and quality as under irrigating.

Growers are already efficient users of water. Horticultural activities have high technical efficiency<sup>21</sup>. Horticultural activities also have high allocative efficiency, this relates to the value generated from the water resource used. We support an approach to allocation that provides greater reliability to the most efficient users of water.

If there isn't sufficient water reliability to produce a marketable yield, it can impact on the quality of produce which will have a flow on effect, both to consumers through higher prices, and to the price and margin received by growers and the flow on effect throughout the supply chain.

Within the horticulture sectors, there are studies underway to better understand abstraction requirements. A three-year study to understand the water requirements for Sungold kiwifruit is underway. Year One has been completed; however, results are not expected to be published until after Year Two (July 2023). The study is being expanded into other regions where Sungold is grown on different soils to provide more in-depth insights. Year three will provide repetition and will cement results.

## **2.3. Harvesting, storage, augmentation and recharge**

Horticultural operations are more efficient users of water compared with pastoral irrigators. Horticulture operations need a secure and highly reliable supply of water for production,

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<sup>20</sup> The GAP schemes, NZGAP and GLOBALG.A.P., are horticulture's Industry Assurance Programmes for fruit and vegetable growers to meet market and regulatory requirements for food safety, social practice, and environmental management. Over 90% of growers in New Zealand are GAP certified. The EMS add-on is tailored to address freshwater risks from horticulture.

<sup>21</sup> Technical efficiency is a measure of the rate at which resource, materials and labour are converted into goods.

compared to pastoral farming, where there is the option to substitute irrigation reliability by importing supplementary feed or selling their animals earlier at market.

It is important to note that water used for crop production is closely matched to crop demand at specific plant growth stages. Both over-watering and under-watering can lead to a non-marketable yield. If a grower cannot produce a marketable yield, there can be significant negative financial and economic impacts, as well as environmental impacts.

Water harvesting, and storage for direct use or augment or recharge is a method that can provide the irrigation reliability required by horticultural crops with lesser impacts on freshwater outcomes. However, the equity of making users who need greater irrigation reliability, pay for private storage, needs to be carefully considered. Storage schemes, such as the Waimea Dam, with multiple benefits to ecosystem and community, are more equitable across users because everyone in the community that uses it pays for the sustainable use of that water resource.

### **3. Proposed Environmental Outcomes**

Environmental outcomes will be important for guiding the level of ambition of policy options developed a part of the NPSFM 2020 plan process.

It is critical that the community are aware of the full impact of decisions made in these earlier stages of the process. We can understand the difficulty of engaging a community over a lengthy plan development and consultation period but do believe community need to be aware of the end product, its impacts on how they can operate and the impact of these early decisions on the plan development and policy options.

It is important to recognise the life supporting capacity and purpose of freshwater for sustaining communities. Populations have always thrived and centred in areas where there is access to freshwater. Freshwater has long been used to grow crops to feed populations. A healthy waterway will, in turn, support populations to thrive.

As the plan develops and more work is completed to form the full picture of the freshwater and community issues in Tasman, it is important to allow the community to reframe their thinking about freshwater goals aspirations and what trade-offs and consequences come from decisions. HortNZ is mindful that the social and economic impact assessment will likely form a key part of what is achievable and what consequences are of each policy direction. This will no doubt impact how much change the community is able to accept. If large scale change that is focused primarily on the water way is advanced without being balanced with the impacts on the local economy, industry and employment this will result in an imbalance in the plan and will be unlikely to be achieved.

The NPSFM process is lengthy and challenging in terms of both keeping the community engaged and then informed. However, HortNZ feels Auckland Council have set a good example in terms of providing the public with consultation documents that clearly outline the NPSFM plan processes, and how the different mechanisms inform and relate to one and

other<sup>22</sup>. The consultation has recently come out and we thought it worth noting in this submission about how Auckland Council have explained the process, and interrelationship between all the different mechanisms within the NPSFM.

### 3.1. Draft FMU visions

HortNZ is supportive of the inclusion of irrigation, cultivation and food production as a value. We encourage greater emphasis to be placed on the production of food for human consumption, as a basic human health need. The current value places the same emphasis on the watering of sports grounds as it does provision of water for growing food for domestic consumption. It is appropriate to have specific reference to horticultural production in key growing areas within Tasman.

HortNZ would like to have this distinction made particularly in the following FMU's that have horticulture:

- Waimea FMU
- Moutere FMU
- Motueka-Riuwaka FMU
- Takaka FMU
- Deep Moutere Groundwater FMU

An alternative approach is to have domestic food supply recognised as a regional value. The Draft Freshwater Plan for Northland takes this approach and recognises domestic food supply as a regional value. This signals that domestic food production is important and can occur in many areas over the region as well as provides for changes in landuse that may occur in the future<sup>23</sup>. This then is considered as a value region wide, with FMU then having other specified values as appropriate.

### 3.2. Draft environmental outcomes

The table below outlines the draft environmental outcome, value description and HortNZ's feedback on these. To develop our submission, we have spoken with growers, reviewed previous submissions and evaluated the draft environmental outcomes in relation to what discussions and directions are being taken in other regions.

HortNZ are mindful that the environmental outcomes decided on will inform the target attribute states and limits. These will set the level of ambition in the plan and options presented to the public for consultation. For example, a higher level of ambition (i.e. water quality above national bottom lines) will have economic, social and land-use trade-offs that need to be carefully considered by the community. For the public to fully understand the

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<sup>22</sup> [Setting our direction for improving freshwater in Tāmaki Makaurau / Auckland | AK Have Your Say \(aucklandcouncil.govt.nz\)](#)

<sup>23</sup> F.A 1.3 - [the-draft-freshwater-plan-change\\_uvn\\_1.pdf\(nrc.govt.nz\)](#)

implications of the options and consequences they need to have a range of options offered with the full consequences of each decision pathway.

Every decision has consequences and in some cases a community may wish to compromise on a high level of ambition or set a longer time frame to achieve their goal if the consequence has a significant impact on their ability to live, work and enjoy their waterbody.

Taranaki Regional Council has taken a good approach with their draft FMU principles<sup>24</sup>. They are clear and relatable for the community. Again, HortNZ felt it was a good opportunity to provide a reference to how other regions are approaching the same issues.

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<sup>24</sup> [Next steps for our freshwater / Taranaki Regional Council \(trc.govt.nz\)](https://www.trc.govt.nz/next-steps-for-our-freshwater/)

## Submission on Tasman District Council - Draft Environmental Outcomes

Without limiting the generality of the above, HortNZ seeks the following decisions on the draft environmental outcomes, as set out below, or alternative amendments to address the substance of the concerns raised in this submission and any consequential amendments required to address the concerns raised in this submission.

Value	Draft environmental outcome	Value Description	Agree / Disagree	Comment
Ecosystem health	<p>Ecosystem Health - Water quality:</p> <p><b>Outcome 1 for Ecosystem Health - water quality</b></p> <p>Freshwater quality supports healthy waterbodies and freshwater ecosystems</p>	Water quality is measured by the physical and chemical attributes of the water, such as temperature, dissolved oxygen, pH, suspended sediment, nutrients and toxicants	Agree	<p>HortNZ suggests that Matauranga Māori monitoring indicators could also be used to assess the state of water quality.</p> <p>Tools developed elsewhere across the country it is an opportunity to work with Te Tau Ihu iwi and develop cultural indicator tools to support understanding of ecosystem health better. Examples:</p> <ul style="list-style-type: none"> <li>• Mauri compass<sup>25</sup></li> <li>• Ngāti Tamaoho in Auckland have developed a cultural indicator tool</li> <li>• Use of establish products such as STREAM<sup>26</sup></li> </ul>
	<b>Outcome 2 for Ecosystem Health - water quantity</b>	The level or flow of water, and it's variability over time	Agree with amendments	The value description needs to be wider. There needs to be consideration of the

<sup>25</sup> [THE NEXT-GENERATION CULTURAL MONITORING TOOL IS HERE - News \(mauricompass.com\)](#)

<sup>26</sup> [The Stream Team | The Stream Ltd](#)



<p>The flow regimes for waterbodies, including variability and minimum flows and levels, support healthy waterbodies and freshwater ecosystems</p>			<p>regime as a whole. Having a sole focus on flow is quite narrow.</p> <p>A more holistic consideration of the water resource, and how it interacts - more than minimum flows, allocation framework, activities that require more water throughout different times of the year, groundwater and surface water interactions.</p>
<p><b>Outcome 3 for Ecosystem Health - Habitat</b></p> <p>Healthy water bodies, including their beds, banks and margins support a range of habitat values including: (a)physical form, structure and extent; (b) natural flows and substrate, pools, riffles and runs; (c) Aquatic and margin vegetation; (d) connections to ecological flood plains* and wetlands; ( e) connections to the groundwater; and (f) natural substrate and available woody material. [*ecological flood plains provide for processes important for ecosystem health but exclude flood plains related to natural hazard risk].</p>	<p>The physical form, structure, and extent of the water body, its beds, banks and margins; its riparian vegetation; and its connections to the floodplain and to groundwater.</p>	<p>Agree with amendments</p>	<p>The outcome should be more succinct, and the detail should be included in the value description, rather than the outcome. For example:</p> <p>Outcome: Healthy water bodies, including their beds, banks and margins that support a range of habitat values</p> <p>Value description: Assessment of habitat quality considers the form, structure and extent of habitat; flows, substrate, pools, riffles and runs; aquatic and marginal vegetation; connections to ecological flood plains, wetlands and groundwater; the nature of the substrate, and availability of woody material.</p>

<p><b>Outcome 4 for Ecosystem Health - aquatic life</b></p> <p>The ecosystem health of Tasman’s waterbodies and their margins support diverse indigenous communities of biota, including microbes, invertebrates, plants, fish, frogs, lizards, bats and birds, in a healthy and abundant state.</p>	<p>The abundance and diversity of biota including microbes, invertebrate, plants, fish and birds.</p>	<p>Agree with amendments</p>	<p>The use of the term aquatic life may be confusing, as the dictionary definition is an animal or plant that lives or grows on or in water. The animals currently listed in the outcome indicate that the intent of the outcome is broader including the margins and non-aquatic species such as bats. The term aquatic environments would potentially more accurately describe the extent of the area that the value relates to.</p> <p>Similar to comments above, the outcome could be made more succinct and the detail moved to the value description. For example:</p> <p>Outcome: The ecosystem health of Tasman’s waterbodies and their margins support diverse indigenous communities of biota in a healthy and abundant state.</p> <p>Value description: Aquatic environments are assessed based on the abundance and diversity of indigenous biota including microbes, invertebrate, plants, fish, frogs, lizards, bats and birds.</p>
<p><b>Outcome 5 for Ecosystem health - ecological processes</b></p>	<p>The interactions among biota and their physical and chemical environment such as primary production,</p>	<p>Disagree</p>	<p>This outcome should be removed, see above comments for Outcome 4.</p>

	<p>The healthy condition of water bodies and their margins provides for ecological processes and the interactions between indigenous species and their habitats, including a) Feeding and roosting b) Migration c) reproduction d) Refuges that enable recolonisation following disturbance e) Primary production, nutrient cycling and trophic connectivity</p>	<p>decomposition, nutrient cycling and trophic connectivity</p>		
Human Contact	<p><b>Outcome 6 for Human Contact</b></p> <p>Water quality is safe for human contact. The healthy mauri and natural aesthetics and amenity of water bodies support recreational use and enjoyment of water through a range of activities</p>	<p>Enabling safe swimming, boating, and water sports. Supporting people to connect with the water through swimming, children’s play, waka, boating, fishing, mahinga kai, and water recreation.</p>	Agree	<p>It is assumed that the outcome refers to primary contact recreation and suggest it would be helpful to be explicit about this.</p> <p>The value description could be simplified, and state that water quality enables safe primary and secondary contact recreation.</p>

Mahinga kai	<p><b>Outcome 7 for Mahinga kai</b></p> <p>Indigenous ecosystems and biodiversity are thriving, providing abundant mahinga kai, food and resource gathering. Mahinga Kai resources are safe to harvest and eat, are accessible to tangata whenua for customary use, and communities can transfer knowledge about traditional practices for the next generations</p>	<p>Enable gathering of foods, tools, medicines and other resources, and providing for manaakitanga</p>	<p>Agree with amendments</p>	<p>The outcome could be made more succinct and suggest the following:</p> <p>Outcome: Mahinga kai resources are plentiful, safe to harvest and eat, accessible to tangata whenua for customary use, enable traditional knowledge to be passed to the next generation, and enable manaakitanga to be provided for.</p> <p>The state of mahinga kai could be assessed using matauranga Māori monitoring approaches, and this should be added to the value description, which presently reads more as an outcome.</p> <p>It is important to note that mahinga kai is more than just indigenous species, watercress for example is a commonly harvested non-indigenous crop.</p>
Threatened species	<p><b>Outcome 8 for Threatened species</b></p> <p>Indigenous ecosystems and biodiversity are thriving and the habitats of threatened species and the conditions necessary to support their survival, abundance and recover are protected and improved</p>	<p>Supporting threatened species presence, abundance, survival and recovery.</p>	<p>Agree with amendments</p>	<p>The outcome could be made more specific and state that threatened species are protected, and where possible supported to increase in abundance. We also assume that it is indigenous species that the outcome is focused on.</p> <p>The value description could also be reframed to focus on the presence and abundance of threatened species</p>

Natural form and character	<p><b>Outcome 9 for Natural form and character</b></p> <p>All waterbodies and their margins have high natural character values, including: a. natural biophysical, ecological, geological, geomorphological aspects; b. natural movement of water and sediment, including hydrological and fluvial processes; c. natural location of a waterbody and course of a river, including room to move and adapt; d. relative dominance of indigenous for a and fauna; e. the presence of culturally significant species; f. natural colour of the water; and g. natural clarity of the water</p>	Protecting natural processes and biological, physical and visual characteristics of waterbodies.	Agree with amendments	<p>Suggest a redrafting of the outcome to make it more succinct: The natural character of waterbodies and their margins is maintained.</p> <p>The value description could also be redrafted: Natural character is influenced by biophysical, ecological, geological, geomorphological characteristics; water and sediment movement; the ability of a waterbody to change course; indigenous flora and fauna; e. the presence of culturally significant species; and water colour and clarity.</p>
Drinking water supply	<p><b>Outcome 10 for drinking water supply</b></p> <p>Source water used for human drinking water requires minimal treatment to meet Drinking Water Standards. Water allocation for domestic and community water supplies is prioritised above other water uses</p>	Water quality and quantity is sufficient for water to be taken and used for drinking water supply		This needs to be broader and how the community can have safe drinking water. This is a discussion with the community in how they wish to achieve this as there may be a number of options worth exploring.

Wai tapu	<p><b>Outcome 11 for Wai tapu</b></p> <p>We respect and treasure our special waters and interconnected places. Healthy mauri of water provides for the well-being, energy and peace of mind of people. Wai tapu are free from human and animal waste, contaminants and excess sediment. Valued features, unique properties and identified taonga of waters are protected.</p>		Agree with amendments	<p>If not already, the term Wai Tapu should be defined. The outcome could be refined to just the last two sentences of the current outcome. The value description.</p> <p>A value description needs to be provided, but HortNZ suggests that other groups would be better placed to provide this.</p>
Transport and Tauranga waka	<p><b>Outcome 12 for Transport and Tauranga waka</b></p> <p>The navigability of freshwater bodies for waka and watercraft is protected, except in circumstances where public health and safety, ecological or cultural values are at risk. Waterbodies are accessible at safe, appropriately located public launching and landing sites</p>	Providing for places to launch, land and use waka and boats	Agree with amendments	The value description needs to be expanded to not only refer to the physical safety of waterbodies, but also the acceptability (from an ecological or cultural perspective) of craft using waterbodies.

Hydroelectric generation	<p><b>Outcome 13 for Hydroelectric generation</b></p> <p>Where freshwater is suitable, hydroelectric generation is recognised and provided for, including small and community scale generation, to enable electricity security and meeting of renewable electricity generation target. Existing generation is protected and upgrading enabled</p>	Enabling use of water for electricity generation.	Agree with amendments	The value description should be amended to reflect the sustainable nature of hydroelectricity generation, also potentially the ability of water used for hydro electricity generation to be used for secondary purposes also (i.e. abstracted for irrigation further downstream).
Fishing	<p><b>Outcome 14 for Fishing</b></p> <p>Freshwater ecosystems are thriving, supporting fisheries of species allowed to be caught and eaten. Fish abundance and diversity provide a range in species and size of fish</p>	Supporting fisheries of species allowed to be caught and eaten	Agree with amendments	<p>The outcome could be redrafted: Fish size, abundance and diversity support recreational fisheries.</p> <p>The amenity of a fishing spot would influence the quality of the experience that a fisherperson had, and this possibly needs to be reflected in the outcome also.</p> <p>The value description needs some refinement also – potentially reflecting the recreational value of fishing.</p>

Irrigation	<p><b>Outcome 15 for Irrigation</b></p> <p>Freshwater resources are equitably and efficiently allocated to support the production of food, including the supply of domestic fruit and vegetables, beverage crops, farmed animals, non-food crops, such as fibre and timber, and the irrigation of recreational areas. Water quality is suitable for irrigation needs</p>	<p>Water is suitable for irrigation needs, including supporting the cultivation of food crops, the production of food from farmed animals, non-food crops such as fibre and timber, pasture, sports fields and recreation</p>	<p>Agree with amendments</p>	<p>More emphasis needs to be given to the importance of the role of food production. Irrigation of food crops should be given priority status over non-food crops, and irrigation of recreational areas. Food is critical to national health, and domestic production of fruit and vegetables arguably fits in the second hierarchy of Te Mana o Te Wai<sup>27</sup>.</p> <p>Arguably, freshwater to support farmed animals is provided for directly in Outcome 16 and does not need to be duplicated in outcome 15.</p> <p>The value description also needed to reflect the importance of the allocation regime to provide sufficient volumes of water for irrigation. A possible redraft could be: Sufficient volumes of clean water are available for irrigation of food crops etc</p>
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<sup>27</sup> BOP regional council in their response to Minister Parkers letter requesting councils respond to how vegetable production will be enabled through the NSFM 2020 plan development supports the idea that vegetables produced for domestic market fit within the second hierarchy as a supporting human health needs.



Animal drinking water	<p><b>Outcome 16 for Animal drinking water</b></p> <p>The quality of source water for drinking water for farmed animals is palatable and safe. Animal drinking water is allocated during droughts to provide for animal welfare</p>	Water is palatable and safe for the needs of farmed animals.		<p>Please see above.</p> <p>Furthermore, it is important to note that in times of drought livestock farmers can move livestock to other areas to ensure their needs are met. Plants are unable to be moved once planted and this reflects the importance of having highly efficient irrigation systems, support for schemes such as the Waimea community dam and the recognition of the role horticultural production plays in supporting the health needs of the population.</p> <p>Stock drinking water is already provided for and protected by s14 of the RMA.</p>
Commercial and industrial use	<p><b>Outcome 17 for commercial and industrial use</b></p> <p>Freshwater resources are equitably and efficiently allocated to support economic opportunities for people, businesses and industries. Water quality is suitable for commercial and industrial needs.</p>	Water quality and quantity can provide for economic uses including commercial and industrial activities.	Agree with amendments	The outcome should be redrafted: Water is equitably and efficiently allocated, and water quality is suitable to support commercial and industrial use.

Public Access	<p><b>Outcome 18 for public access</b></p> <p>Access to waterbodies and their margins is maintained and enhanced to provide for tangata whenua and community relationships and connections with water through a range of activities and shared uses (except in circumstances where public health and safety, ecological, or cultural values are at risk). Public access is protected through public ownership or legal agreements</p>	<p>Providing and maintaining areas in public ownership or with legal agreements so that they are accessible by the public.</p>	<p>Agree with amendments</p>	<p>The outcome sought could be simplified: Public access to waterbodies and their margins is maintained and enhanced to provide for tangata whenua and community relationships with waterbodies.</p> <p>As currently drafted the value description doesn't seem fit for purpose - it should outline why public access is important.</p> <p>Reverse sensitivity issues may need to be managed if public access is located near primary production, although we also note that this is a matter better dealt with through objectives and policies within the plan.</p>
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Aggregate resources	<p><b>Outcome 19 for Aggregate resources</b></p> <p>Aggregate resources within waterbodies and their margins or overlying aquifers are managed to support economic and social opportunities for people, businesses and industries, except where ecosystem health, human health needs, natural character or cultural values may be adversely affected.</p>	<p>Aggregate resources (e.g. gravel and sand) management provides for economic and social uses, including roading and development</p>	<p>Agree with amendments</p>	<p>The value description would be more appropriate as an outcome.</p> <p>Outcome: Aggregate resources are managed to enable abstraction that supports economic and social development, while ensuring that water quality is maintained.</p> <p>Value description: Access to local aggregate supply is important to the economic and social development of the district but must be managed in a way that ensures water quality is protected, and supply is available overtime.</p>
Resilience to climate change	<p><b>Outcome 20 for Resilience to climate change</b></p> <p>Our waterbodies and freshwater ecosystems have room to move and adapt and are resilient to the effects of climate change, including droughts, flooding and sea-level rise. Waterbody refuges and connectivity enable recolonisation following disturbance. Our communities are resilient to the effects of climate change, including droughts, flooding and sea-level rise.</p>	<p>Ensuring waterbodies and communities are resilient to the effects of climate change, including droughts, flooding and sea-level rise.</p>	<p>Agree with amendments</p>	<p>Resilient waterbodies can respond to climate change.</p> <p>The resilience of the freshwater resource and ongoing reliability and water security is arguably linked to the ability to create water storage options to minimise risk to water storage.</p> <p>And then if there is a separate community outcome, it would also need a separate value description.</p>

Kaitiakitanga/stewardship	<p><b>Outcome 21 for Kaitiakitanga / Stewardship</b></p> <p>Our waterbodies have healthy mauri and are cared for and respected by our communities. People maintain strong relationships with waterbodies and their margins. The use of land, water and catchments resources is recognised as a privilege. Communities are enabled to be guardians, giving back to the catchments to ensure they are healthy for future generations.</p>	Enabling guardianship of the environment by tangata whenua and communities.	Agree with amendments	<p>Manawhenua relationship with water bodies is inextricably linked with their history in a place. This is reinforced by the naming of places which identify significant people or resources Manawhenua have accessed throughout their occupation of an area to support their community. It is critical to understand and recognise the relationship between, mana whenua, their history in an area and how the freshwater resource has been able to sustain Manawhenua in the past.</p> <p>This is important when considering the purpose to elevate the health of a waterway and our responsibility to it is to ensure communities can be sustained by the waterway in the future</p> <p>HortNZ suggests deleting 'stewardship' and having just Kaitiakitanga as the outcome title as conceptually these have two slightly different approaches to care. Kaitiakitanga is a concept from within Te Ao Māori and balance is a key concept. Kaitiakitanga approach would recognise that we need to care for the environment and waterbodies so they can continue to support and sustain us in the future. A greater emphasis is placed on our interrelationship between action and environment in this concept.</p>
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