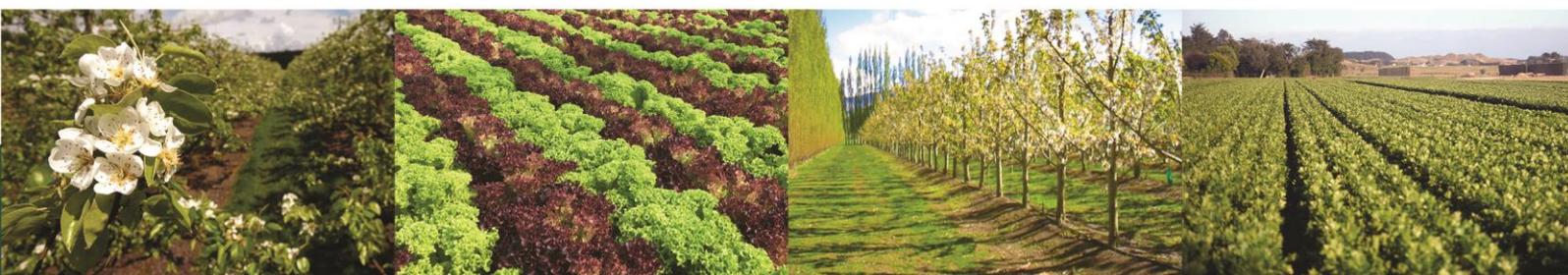


# **SUBMISSION ON Hawke's Bay Regional Council TANK Plan Change (PC9)**

14 August 2020

**TO:** Hawke's Bay Regional Council

**NAME OF SUBMITTER:** Horticulture New Zealand



## **CONTACT FOR SERVICE:**

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# 1. HortNZ's Role

## Introduction

Horticulture New Zealand (HortNZ) thanks Hawke's Bay Regional Council for the opportunity to submit on the TANK (Tutaekuri, Ahuriri, Ngaruroro and Karamu) Plan Change/Plan Change 9 and welcomes any opportunity to continue to work with Hawke's Bay Regional 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 from Council are set out later sections of our submission.

## Background to HortNZ

HortNZ was established on 1 December 2005, combining the New Zealand Vegetable and Potato Growers' and New Zealand Fruitgrowers' and New Zealand Berryfruit Growers Federations.

HortNZ represents the interests of 5000 commercial fruit and vegetable growers in New Zealand, who grow around 100 different crop types and employ over 60,000 workers. Land under horticultural crop cultivation in New Zealand is calculated to be approximately 120,000 hectares.

The horticulture industry's value is almost \$6.4 billion and is broken down as follows:

<b>Industry value</b>	<b>\$6.39bn</b>
Fruit exports	\$3.53bn
Vegetable exports	\$0.7bn
<b>Total exports</b>	<b>\$4.23bn</b>
Fruit domestic	\$0.88bn
Vegetable domestic	\$1.28bn
<b>Total domestic</b>	<b>\$2.16bn</b>

Kiwifruit exports alone earn more than \$2.3 billion.

It should also be acknowledged that it is not just the economic benefits associated with horticultural production that are important. The rural economy supports rural communities and rural production defines much of the rural landscape. Food production values provide a platform for long term sustainability of communities, through the provision of food security.

HortNZ's mission is to create an enduring environment where growers prosper. This is done through enabling, promoting and advocating for growers in New Zealand to achieve the industry goal (a \$10 billion industry by 2020).

## HortNZ's Resource Management Act 1991 Involvement

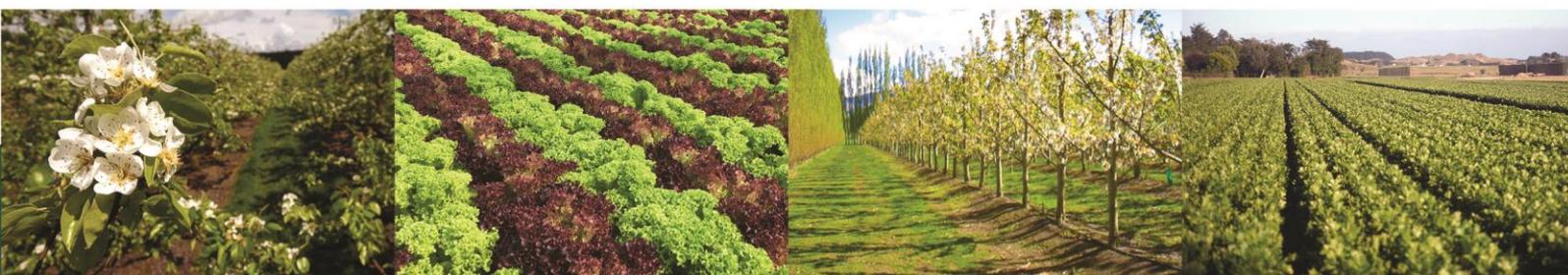
On behalf of its grower members HortNZ is involved in resource management planning processes around New Zealand. HortNZ also works to raise growers' awareness of the Resource Management Act 1991 (RMA) to ensure effective grower involvement under the Act.

The principles that HortNZ considers in assessing the implementation of the RMA include:

- The effects based purpose of the RMA;
- Where possible, non-regulatory methods should be employed by councils;
- Regulation should impact fairly on the whole community, make sense in practice, and be developed in full consultation with those affected by it;
- Early consultation of land users in plan preparation;
- Ensuring that RMA plans work in the growers interests both in an environmental and sustainable economic production sense.

## 2. Horticulture across the TANK Catchments

1. Horticulture is hugely important to the Hawke's Bay region. Around 16,800 ha of commercial fruit and vegetable production is undertaken on the Heretaunga Plains. HortNZ represents around 250 horticultural growers that live within the TANK Catchments.
2. In Hawke's Bay, HortNZ is affiliated with two key local associations representing growers within the Hawke's Bay region, namely the Hawke's Bay Fruitgrowers Association, and the Hawke's Bay Vegetable Growers Association. Alongside these local associations, a number of product groups representing specific product categories are also affiliated to HortNZ. One of those product groups, New Zealand Apples & Pears, is based in Hastings because of the importance of Hawke's Bay to the country's pipfruit production. Most of the other 21 product groups are active within Hawke's Bay as well, and specifically across the TANK Catchments.
3. Seventy percent (70%) of all apples produced in New Zealand are grown in the Hawke's Bay, with the vast majority of those orchards located within the TANK Catchments. Summerfruit, green beans, sweetcorn, squash and onions are other significant crops for the region, with large areas of summerfruit, squash and onions in particular being grown within the TANK Catchments.
4. Specialised post-harvest pack houses add significant value after the farm gate and many growing organisations are now integrated into the post-harvest chain. There are two significant international fruit and vegetable processing facilities located in Hastings (Heinz Wattie's and McCain's), and those post-harvest processing facilities alone employ over 1800 people. Both companies have recently invested significant capital in upgrading their facilities here. The Hawke's Bay region produces over 30% of New Zealand's processed vegetables.



5. Hawke's Bay produces significant quantities of food for domestic supply, which is important for the health and well-being of all New Zealanders. Hawke's Bay's contribution to the domestic food supply is particularly important because of the warmer climate which means that it can provide fresh produce when other regions are not able to provide fruit and vegetables into the supply chain. For example, Hawke's Bay harvests summerfruit such as nectarines and peaches which supplies New Zealand consumers before later season fruit grown in the South Island becomes available. The regional food system supports a resilient and reliable domestic food system.
6. There is also extensive export production within the region, which provides employment opportunities for many people. The Heretaunga Plains are a nationally significant source of highly productive land and significant protection of this land has been regulated within district and regional planning tools due to pressures from urbanisation. Food and fibre production are recognised as a significant value within the Regional Policy Statement and as 'primary values and uses' for the Greater Heretaunga/Ahuriri.
7. The Hawke's Bay has over 1700 grow days above 10 degrees, and over 2300 hours of bright sunshine. This warm, sunny climate along with versatile soils are ideal for growing. However, the Heretaunga Plains commonly has about 95 days between November and April when there is insufficient soil moisture to maintain plant growth without irrigation<sup>1</sup>. Climate change is expected to bring warmer weather and changes in rainfall seasonality to Hawkes Bay. Growers are very aware of the changing climate and the potential for more frequent droughts, such as the drought experienced this year. Ensuring good quality water continues to be available for irrigation of horticultural crops is critical to the ongoing success of the sector within the TANK catchments.
8. Supporting horticultural production is also very important in terms of New Zealand's response to climate change. Less than 1% of the country's greenhouse gas emissions are produced by horticulture. Supporting land use diversification to allow increased horticulture is critical to New Zealand achieving a transition to a low emission economy in line with the Climate Change Response (Zero Carbon) Amendment Act 2019.13.
9. In 2019, Hawke's Bay was the location for the world's first commercial robotic apple picker, harvesting New Zealand-developed Jazz™ and Envy™ Apple cultivars<sup>2</sup>. The technology was developed in a partnership between T&G Global and US-based technology partner Abundant Robotics. Canopy innovation and trialling of different ways of achieving automation compatibility have progressed in orchard expansion initiatives since 2017. In preparation for robot harvesting, orchards had to be re-developed to a high density 2-dimensional growth structure. Exciting technological innovations such as this have changed the pattern of water demand, and it is critically important Plan Change 9 maintains sufficient flexibility in water use moving forward to allow other technological advancements to be facilitated.

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<sup>1</sup> NIWA 2013. The climate and weather of Hawke's Bay.

<sup>2</sup> Sources: [www.tandg.global](http://www.tandg.global) and independent.

### 3. HortNZ's Submission on TANK Plan Change/Plan Change 9

#### General Comments

Achieving water security is considered by the horticultural sector, to be the single biggest issue threatening the sustainability of the horticultural sector in the TANK catchments, and more broadly in Hawke's Bay. It is critical that the harvesting of water at high flows, and storage for later utilisation, is provided for by the TANK plan change and HortNZ submits that the total allocation of high flow water identified in the plan must be able to be harvested, and further work also needs to be done to identify whether or not additional water can be taken for this purpose, as HortNZ understands that a significant amount of the allocation set out in the proposed plan has already been allocated or applied for, which means that the 'solution' for accessing new water that this plan change hinges on, potentially will provide additional water for a very limited number of people.

The other matters that are of particular concern to the horticultural sector (and are listed below in order of priority) are the proposed regulatory approaches to:

- The replacement of water permits based on actual and reasonable use
- Stream flow maintenance and augmentation schemes
- Reallocation of water during the life of the plan
- Transfers of water permits
- Provision of water for survival of permanent horticultural crops
- Enabling crop rotation
- Recognising the value of land use change in providing for food security and NZ's transition to a low emissions economy
- Assessment of water quality effects across all contaminants and related to achieving priority freshwater outcomes
- Industry programmes and collectives

Further detail about each of these matters is provided in the body of this submission, but HortNZ considers it important to highlight the importance of these matters to the horticultural sector.

Notwithstanding the above comments, HortNZ fundamentally supports the general approach of the TANK Plan Change, and believe that it strikes a reasonable balance between seeking to improve the quality and quantity of the TANK catchments freshwater resources through a range of different regulatory requirements, and ensuring that those who rely on water can continue to use it. The plan allows time for practice changes to be made, and the impact of those monitored and understood, before decisions about further restrictions are made. This approach is supported by HortNZ and considered to be consistent with the sustainable management purpose of the RMA. The plan change also provides an opportunity for more information to be gathered to inform future decisions about matters that simply are not understood at present, such as the nature of groundwater resources in the Ahuriri Catchment, or sustainable nutrient loads into the TANK estuaries.

HortNZ also strongly advocates for freshwater plan changes to enable groups of landowners (at whatever scale they chose to come together at) to manage environmental effects collectively – rather than focusing at the individual or enterprise scale. HortNZ recognises that PC9 goes some way to trying to do this, however, in referring to catchment collectives, whether intentionally or not, sets an expectation that collectives will be at that scale. That is not the case - every collective grouping will be slightly different and work in a slightly different way, and it is critically important that every group is enabled. What is more important than the scale at which a group comes together, is that each group has a strong relationship

amongst its members, and will operate over an extended period of time to maintain, or achieve improvements in freshwater management. HortNZ therefore submits that all references to 'catchment collectives' should be amended to refer more broadly to 'collectives' and any other necessary changes be made to ensure that collective groups are enabled and recognised at any and every scale they form at. For the sake of brevity, every instance where the term catchment collectives is currently used, and we submit should be replaced with 'collective', is not identified in the table that summarises the relief sought by HortNZ at the end of this submission, however that is the outcome we are seeking in relation to this matter.

HortNZ agrees that managing freshwater resources is complex and many issues are interconnected. HortNZ recognises that there are costs associated with it, some of which may be significant, that will need to be borne by the community if the quality of the aquatic ecosystems within the TANK Catchments is to be improved, however HortNZ strongly contends that these costs must be borne by all members of the community that use water – which is arguably almost every person that either lives or works within the TANK Catchments. The costs must not be disproportionately apportioned to irrigators who only use approximately 50% of the water abstracted from the system that influences flows in the Ngaruroro River. The rest of the water abstracted is used for municipal and industrial purposes, and it is appropriate that the cost of improving TANK's freshwater resources are spread across everyone that benefits from using them. Three reports<sup>3</sup> have considered the impact that greater restrictions on water use would have on the horticultural sector and demonstrated that those impacts would be hugely damaging for the TANK catchments, and arguably the region as a whole. Food production is critical to ensure the health and well being of the TANK community, in addition to the positive economic benefits, and arguably environmental benefits, that result from horticultural production within the TANK catchments. HortNZ submits that, as currently drafted, the TANK Plan Change does not adequately recognise the critical importance of horticulture to the future sustainability of the TANK Catchments, and there are some changes required to the proposed plan to ensure that sufficient water is available (particularly transfer of consented water and new water that can be taken at times of high flow), and some flexibility in terms of land use change is enabled to provide for that. The value of horticulture and its critical role in providing for domestic food supply and security, and the ability to feed people in the future is not currently reflected in the proposed Plan Change 9. The 'significant regional and national value of freshwater use for production and processing of beverages, food and fibre' is recognised in Obj LW1 of the Regional Policy Statement. As currently drafted, HortNZ submits that the regional and national importance of those activities has not been sufficiently acknowledged, given the great difficulty any producer of beverages, food and fibre would have in accessing any additional water under the proposed plan, and potentially even maintaining the water that they need to support their existing operations. The plan change also effectively locks everyone into historic patterns of water and land use, which arguably is a pattern of water and land use that has resulted in some adverse effects on the environment. This plan change needs to provide opportunities for change that will enable improvements in freshwater management to be achieved. HortNZ submits that if the changes set out in this submission are incorporated into the plan change, then that could potentially be addressed.

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<sup>3</sup> Archer, L. & Brookes, J. (2018) Modelling Water Restrictions and Nutrient Losses for Horticulture in the TANK Catchment – An Economic Analysis, AgFirst; Nimmo-Bell & Co Ltd (2018) Direct Economic Impact of the TANK – A report prepared for Hawke's Bay Regional Council', Nimmo-Bell; McDonald, G & McDonald N. (2018) Economy-wide Impacts of Proposed Policy Options for the TANK Catchments, Market Economic Limited;

## General comments about Plan Change 9

HortNZ submits that the following matters need to be addressed throughout the plan change:

- There is a need to review, and make explicitly clear, the scale at which each and every provision applies – is it at a property, farming enterprise, sub-catchment, catchment, water management unit or catchment collective scale – or an alternative scale? This is not currently clear, and in the provisions where the scale of assessment is specified, it is unclear why that particular scale has been chosen, as it varies significantly throughout the plan change document. HortNZ submits that this needs to be made clear in every provision, and planning maps prepared and included in the plan that clearly show the extent of each and every ‘scale’ at which provision will apply.
- There is a need to ‘tighten up’ terminology used as in some cases different terms are used to refer to what appears to be the same thing – for example, within TANK 5 both ‘catchment collective’ and ‘landowner collective’ are used, when it appears that the same entity is in fact being referred to. Another example is the variation in ways that the Karamu and Clive Rivers are referred to (refer to Obj TANK13 and Policy 2 for example). It is really important that consistent terminology is used to refer to the same things, and also that distinctively different names are used to refer to ‘water quality’ entities (e.g. catchment collectives, but as outlined in this submission what HortNZ believes should be simply collectives), compared to ‘water quantity’ entities (such as stream flow maintenance schemes), so that it avoids confusion for the many people that may be members of both. It is acknowledged that in some cases an entity could effectively serve both purposes, but that will certainly not be the case everywhere. A plan is only as effective as its implementation, so at all times, checks and considerations need to be made of how the plan will be interpreted and understood by plan users, so that those who need to make changes to their practices, can understand what those changes are.
- HortNZ submits that the term ‘good management practice’ should be used, instead of industry good practice or other variations. This would be consistent with approaches taken in other regions such as Canterbury, and from a HortNZ perspective, is consistent with the terminology used within GAP schemes.
- HortNZ is concerned that the provisions proposed in the plan may not be sufficient to address the issues challenging the ecosystem health of the Ahuriri Estuary. It is the observation of growers living within the Ahuriri Catchment that sediment inflow to the estuary, at least in recent times, have largely been the consequence of recent, large scale subdivisions on the hills of the catchment. It is unclear how the rules of this plan change will tackle such activities. The number of horticultural growers within the Ahuriri Catchment, particularly in the northern part around Bay View is small, yet efforts to reduce sediment are targeted at owners of blocks of land greater than 10ha, which arguably, may not address one of the key sources of the problem. HortNZ will support its growers to improve their practices where they are not already at or exceeding good management practice, but also submits that all potential contributors to the problem need to be addressed by this TANK plan change, to ensure that improvements in the ecosystem health of the estuary can be achieved.

## Specific comments on proposed provisions

HortNZ has specific comments about the provisions detailed below as currently drafted, and seek the specific amendments set out in the table at the end of the submission, or amendments to like effect. We also note that there are likely to be consequential amendments arising from these that may affect the whole plan.

### Objectives

#### **OBJ TANK 4**

*Land and water use, contaminant discharge and nutrient loss activities are carried out so that the quality of the TANK freshwater bodies is maintained where objectives are currently being met, or is improved in degraded waterbodies so that they meet water quality attribute states in Schedule 26 by 2040 provided that:*

- a) For any specific water body where the attribute state is found to be higher than that given in Schedule 26, the higher state is to be maintained; and*
- b) Maintenance of a state is at the measured state<sup>4</sup>.*

HortNZ submits that the scale of the proposed surface water management units is large. It is unclear where the target attribute states are to be achieved – if this includes all current monitoring locations, or at a subset of monitoring sites at a smaller sub-catchment scale. The maps would be improved by including the locations of the monitoring sites and the current attribute state at those sites, so it is clearer whether the outcomes sought are to maintain or improve water quality, and where this is required.

HortNZ also notes that it is unclear whether or not modelled state data will be used where actual monitoring data is not available, and if ‘modelled’ state data is used does ‘maintenance’ mean that it can’t decline within the relevant NOF band? This needs to be clarified.

#### **OBJ TANK 7**

*Land use is carried out in a manner that reduces contaminant loss including soil loss and consequential sedimentation in freshwater bodies, estuaries and coastal environment.*

Some land use, particularly horticultural land use on flat land with permanent crops, will presently be undertaken in a manner that already meets good management practice, or may even be at best management practice, therefore it would be difficult, and arguably unnecessary to reduce contaminant loss further. It is important that growers that are already operating at or exceeding good management practice are acknowledged, while simultaneously recognising that there are some practices that could and should be improved to reduce contaminant loss. HortNZ believes that good management practice should be industry specific where established industry codes of practice are available, such as Horticulture New Zealand’s Code of Practice for Nutrient Management, or with broader primary sector documents, such as the Industry-agreed Good Management Practices relating to water quality<sup>5</sup>, which HortNZ was a partner in the development of. It is also important that the ongoing evolution of good and best management practices is acknowledged and enabled by regulatory frameworks, as particularly the individual product groups that HortNZ represents, as well as some larger producers have ongoing research and development programmes that are constantly looking for ways to reduce the environmental footprint of horticultural production, and all growers must be enabled to adopt good management

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<sup>4</sup> The state is as measured according to the method specified for each attribute. It does not allow for decline to a lower state within any band specified in the NPSFM:2014 (as amended 2017);

<sup>5</sup> <https://ecan.govt.nz/your-region/farmers-hub/gmp/what-are-industry-agreed-good-management-practices/>

practices as and when they are developed. A need for resource consents in particular to be drafted with this in mind is critical, and will mark a departure from current practices that have sought to include increasingly specific conditions, that could potentially make any changes in on-farm practices (even if they represent new good management practices) not consistent with application documentation a compliance issue.

HortNZ recognises that the TANK estuaries in particular are vulnerable to sediment discharges, and that methods that seek to manage this risk should be focused on the overall load of sediment that is discharged from land uses to sensitive downstream receiving environments, rather than focussing on contributions from individual properties/enterprises.

## **OBJ TANK 8**

*Aquatic ecosystem health and mauri of water bodies in the TANK catchment is improved by appropriate management of riparian margins to:*

- a) reduce effects of contaminant loss from land use activities;*
- b) improve aquatic habitat and protect indigenous species including fish spawning habitat;*
- c) reduce stream bank erosion;*
- d) enhance natural character and amenity;*
- e) improve indigenous biodiversity;*
- f) reduce water temperature in summer;*
- g) reduced nuisance macrophyte growth.*

HortNZ supports the intent of OBJ TANK 8, however question what ‘appropriate management’ entails. It is also unclear from the drafting of the objective the scale at which this objective applies – is it at a property/enterprise scale, or is this at a sub-catchment/catchment level? HortNZ strongly believes that it should be at a scale greater than the property/enterprise, as riparian planting will not necessarily be the most pressing action that needs to be addressed on every individual property/enterprise – particularly in the case of horticultural operations where stock access to waterways is generally not an issue. HortNZ strongly believes that a sub-catchment/catchment approach to addressing water quality issues must be the focus of PC9, as this allows better ‘bang for buck’ to be achieved, and areas with the poorest water quality to be targeted first, rather than potentially focusing on every individual undertaking actions on their own property/enterprise, which arguably could result in limited improvements in water quality over a longer period of time. Collective management of water quality is considered to be more effective, and arguably is enabled, to some degree, by the proposed stream flow maintenance schemes that are proposed to be established. HortNZ supports a collective approach, although does have some concerns about the drafting of the specific provisions relating to stream flow maintenance schemes, which are addressed in further detail as relevant throughout this submission.

HortNZ also notes the importance of HBRC Works Group in its role managing the regions flood control and drainage schemes in potentially achieving this objective, and while the need for them to continue to effectively maintain the schemes is accepted and supported as it is something that horticultural growers rely on, the works groups practices to date have in some places not been conducive to the establishment of riparian planting on margins, therefore it is submitted that these practices need to be reviewed, and where appropriate amended.

The regional council also has an important role to play in the achievement of this objective as providers of expert knowledge about riparian planting. In the process of preparing this submission, HortNZ has received feedback from a number of growers who have requested information about riparian planting

from the council, and it has not materialised. This needs to be recognised as a matter of urgency by the council, and made available as soon as possible – potentially before the provisions of this plan are finalised, because the enthusiasm of landowners is critical in achieving improvements in riparian margins, and the resources that growers have to undertake such work (in terms of both time and money) can and does vary, so it is critically important that they are enabled to undertake planting when they are willing and able to do so. HortNZ and the horticultural product groups are happy to work with the council to develop riparian planting advice for orchard and vegetable growing landscapes, including crop specific advice that includes crop specific pest management considerations, as well as information about long-term maintenance considerations that need to be considered at the time of establishing riparian planting.

## **OBJ TANK 15**

*In combination with meeting the water quality states specified in Schedule 26, the use and development of land, the discharge of contaminants and nutrients, and the taking, using, damming and diverting of freshwater connected to the Wetland and lake waahi taonga within the TANK catchments is managed so that mauri, water quality and flows, and levels are maintained and improved to enable;*

- a) healthy and diverse indigenous fish, bird and plant populations in wetland and lake areas and connected waterways;*
- b) improved hydrological functioning in wetland and lakes and in connected waterways;*
- c) people to safely carry out a wide range of social and cultural activities;*
- d) collection of mahinga kai to provide for social and cultural well-being;*
- e) contribution to improved water quality in connected surface waters;*
- f) the protection of the outstanding values of the Kaweka Lakes, Lake Poukawa and Pekapeka Swamp and the Ngamatea East Swamp; And to;*
- g) increase the total wetland area by protecting and restoring 200ha hectares of existing wetland and reinstating or creating 100ha of additional wetland by 2040.*

While the overall intent of the objective is understood, it lacks clarity about how the 200ha of existing wetland to be restored and 100ha to be reinstated or created will be identified, and thus the objective achieved. It is important that the identification of these areas is undertaken in a collaborative manner, in which all interested parties are involved in the discussions. If areas where restoration or reinstatement/creation could be undertaken have already been identified, it would be useful if that information was socialised so that communities of interest to each potential area of enhancement can begin to discuss it. It is also important that wetland restoration/creation is done taking into account any impact it may have on flood levels on adjoining and/or upstream properties, and it is suggested that this needs to be included as a specific matter in this objective. Growers have raised concerns about being excluded from discussions about potential wetland developments, where those activities have or would have a real impact on flood levels on their properties. Changes in water levels can have real and immediate impacts on crop yields, as well as making other management practices more difficult as a consequence of wetter soils, which can result in new, adverse environmental effects. HortNZ therefore submits that wetland restoration or creation work is undertaken in a holistic manner, that properly accounts for the needs of all stakeholders that would be impacted by it.

## **OBJ TANK 17**

*The allocation and use of water results in;*

- a) the development of Māori economic, cultural and social well-being supported through regulating the use and allocation of the water available at high flows for taking, storage and use;*
- b) Water being available for abstraction at agreed reliability of supply standards;*
- c) Efficient water use;*
- d) Allocation regimes that are flexible and responsive, allowing water users to make efficient use of this finite resource.*

It is not clear whether the list is in any order of priority order. If it is, then HortNZ opposes the prioritisation of a) over matters b)-d). In any event, whether or not the list sets an order of priority needs to be clarified.

## **OBJ TANK18**

*The current and foreseeable water needs of future generations and for mauri and ecosystem health are secured through;*

- a) water conservation, water use efficiency, and innovations in technology and management;*
- b) flexible water allocation and management regimes;*
- c) water reticulation;*
- d) aquifer recharge and flow enhancement;*
- e) Water harvesting and storage.*

As already set out in this submission, given that water harvesting and storage (based on this current draft of the plan change) provides the only means of accessing 'new' water, HortNZ cannot emphasise enough how critical water harvesting and storage is to ensure the foreseeable water needs of even current, let alone future, generations, and that the total allocation set out in Schedule 32 can be taken, as well as the potential for additional water to be harvested investigated also. HortNZ submits that there should be prioritisation introduced to this objective, and water harvesting and storage should be recognised as being the most important means of securing water for future generations. HortNZ agrees that reductions in water use, and thus steps towards achieving greater water security will be achieved through the matters identified in a), b) and c), however 'gains' are unlikely to be significant, as many horticultural growers are already achieving (or are beyond) good management practice with respect to their water use efficiency, with the technology that is currently available. Technology will continue to develop over time, and all water users should be required to operate in accordance with good management practice, however, this will take some time. HortNZ also understands that there remains considerable uncertainty about whether 'aquifer recharge' is a viable means of securing the current and foreseeable water needs of future generations, and therefore seeks that it is deleted from this objective.

## Policies

### Policy 1 – Priority Management Approach

*The Council with landowners, local authorities, industry and community groups, mana whenua and other stakeholders will regulate or manage land use activities and surface and groundwater bodies so that water quality attributes are maintained at their current state or where required show an improving trend towards the water quality targets shown in Schedule 26 by focussing on:*

- a) water quality improvement in sub-catchments (as described in Schedule 28) where water quality is not meeting specified freshwater quality targets;*
- b) sediment management as a key contaminant pathway to also address phosphorus and bacteria losses;*
- c) the significant environmental stressors of excessive sedimentation and macrophyte growth in lowland rivers and nutrient loads entering the Ahuriri and Waitangi estuaries;*
- d) the management of riparian margins;*
- e) the management of urban stormwater networks and the reduction of contaminants in urban stormwater;*
- f) the protection of water quality for domestic and municipal water supply.*

HortNZ agrees that the protection of water quality for domestic and municipal water supply is important, but also believe that its protection for irrigation purposes is important, particularly for the irrigation of horticultural crops, where water contaminated with sediment and pathogens can be unsuitable for irrigated food crops. HortNZ believes that 'irrigation purposes', should be added to f).

### Policy 2

*In the Clive/Karamū Rivers and their tributaries, in addition to Policy 1 the Council will work with mana whenua, landowners and the Hastings District Council to:*

- a) reduce water temperature and increase the level of dissolved oxygen by;*
  - (i) the establishment of riparian vegetation to shade the water and reduce macrophyte growth while accounting for flooding and drainage objectives;*
  - (ii) reducing excessive macrophyte growth by physical removal of aquatic plants in the short term;*
- b) adopt flow management regimes to remedy or mitigate the effects of surface and ground water abstraction;*
- c) reduce the amount of sediment and nutrients entering the freshwater from adjacent land;*
- d) improve stormwater and drainage water quality and the ecosystem health of urban waterways and reduce contamination of stormwater associated with poor site management practices, spills and accidents in urban areas (refer also to Policies 28 -31).*

HortNZ submits that, in relation to (a)(i), it is important that it is recognised throughout the plan that the horticultural sector has strict biosecurity requirements that must be met, and riparian planting requirements need to accommodate that – for example, there may be some riparian plant species that can't be planted close to particular horticultural crops because they are potential host species for pests. HortNZ is happy to work with the council to ensure that advice around riparian planting is appropriate for horticultural contexts. The current drafting of the policy also doesn't make it clear the scale at which the policy is to be applied and assessed. HortNZ is strongly of the view that collective management is in most cases more effective, as it allows the most pressing problems to be addressed first, and ensures the greatest return on investment, when arguably it will take time for improvements across all catchments to be realised. As a result, HortNZ suggests that collectives are also included in the policy, as they will be crucial to achieving the outcomes sought.

## Policy 4

*In the lower Ngaruroro and Tūtaekurī Rivers and their tributaries, in addition to Policy 1 the Council will work with landowners to:*

- a) improve water clarity and reduce deposited sediment by reducing the amount of sediment being lost from land;*
- b) reduce risk of proliferation of algae by reducing nutrient losses from land, including by reducing phosphorous loss associated with sediment;*
- c) improve ecosystem health and water quality by excluding stock from surface water bodies and improving riparian management.*

It is unclear what the extent of the area referred to as 'the lower Ngaruroro' is. This needs to be defined and mapped, so the extent of the area that this policy applies to is clear.

## Policy 6 – Protection of Source Water

*The quality of groundwater of the Heretaunga Plains and surface waters used as source water for Registered Drinking Water Supplies will be protected, in addition to Policy 1, by the Council:*

- a) identifying a source protection extent for small scale drinking water supplies or Source Protection Zones for large scale drinking water supplies by methods defined in Schedule 35; and*
- b) regulating activities within Source Protection Zones that may actually or potentially affect the quality of the source water or present a risk to the supply of safe drinking water because of;*
  - (i) direct or indirect discharge of a contaminant to the source water including by overland flow or percolation to groundwater;*
  - (ii) an increased risk to the safety of the water supply as a result of a non-routine event ;*
  - (iii) potentially impacting on the level or type of treatment required to maintain the safety of the water supply;*
  - (iv) shortening or quickening the connection between contaminants and the source water, including damage to a confining layer;*
  - (v) in the case of groundwater abstraction, the rate or volume of abstractions causing a change in groundwater flow direction or speed and/ or a change in hydrostatic pressure that is more than minor.*

The extent of the Source Protection Zones as currently mapped is extensive, and they cover a lot of land currently used for growing horticultural crops. The current drafting of the policy does not make it clear whether the new provisions apply to existing activities, or if they only relate to new activities. This needs to be made explicit in the policy.

If it is to apply to existing activities, the first priority should be for drinking water suppliers to quantify the vulnerability of the registered drinking water supply to contamination from land use, and then consider options to relocate existing drinking water supplies to less vulnerable locations, and to avoid locating new drinking water sources in locations that are vulnerable to contamination due to their hydrogeology.

.. The overall approach to source water protection within the plan is currently blunt and needs refinement. For example – can the contaminants that may cause an issue for registered drinking water supplies be specified, as arguably not all contaminants present a particular risk to the safe supply of drinking water. HortNZ supports regulation to ensure that registered drinking water supplies are kept safe, however it must be acknowledged that these new regulations relate to extensive areas of land, much of which is underlain by highly productive soils used for horticultural purposes. Productive soils are limited in their extent, and therefore their ongoing use for productive purposes must be protected, and arguably the

current drafting of this policy, as well as all others related to source protection zones, threatens to undermine that.

## **Policy 7**

*When considering applications to take water for a Registered Drinking Water Supply, the Council will:*

- a) provide for the replacement or amendment of a source protection extent or Source Protection Zone which reflects the level of protection required for that supply, according to a method specified in Schedule 35;*
- b) provide for the amendment of a Source Protection Zone where new information changes the outputs from the method specified in Schedule 35;*
- c) require applications to include an assessment of the Source Protection Zone required, taking into account the factors set out in Schedule 35;*
- d) have regard to:*
  - (i) the extent to which the application reflects the factors and methodology in Schedule 35 when establishing the Source Protection Zone; and*
  - (ii) the impacts, including any costs and benefits, of any additional restrictions in the Source Protection Zone;*
  - (iii) the level of consultation with landowners in the Source Protection Zone.*

While HortNZ supports the inclusion of methods within this plan change that enable the extent of source protection zones to be amended (and particularly reduced) without the need for a full plan change, as currently drafted, this policy has a high degree of flexibility, and ability for the extent of zones to be amended, which does not provide sufficient certainty for horticultural growers that may be impacted by it. As noted above, HortNZ submits that the first priority should be for registered drinking water supplies to avoid locating new registered drinking water supplies in vulnerable locations, and existing drinking water supplies relocated to less vulnerable locations where possible.

Notwithstanding the above, HortNZ submits that an explicit matter of consideration should be added to subsection (d) that requires the impact of any source protection zone on the ability of highly productive soils to be used/continue to be used for productive purposes, as if an area of productive soil would not be able to sustain such use as a consequence of being included within a source protection zone, then it is HortNZ's view, given the limited availability of these soils, the location of the registered drinking water supply must be revisited.

## **Policy 8**

*The Council will, when considering applications to discharge contaminants or carry out land or water use activities within:*

- a) the source protection extent for Registered Drinking Water Supplies, take into account possible contamination pathways and risks to the quality of the source water for the water supply,*
- b) A Source Protection Zone, avoid or mitigate risk of contamination from the activity of the source water for the water supply by taking into account criteria including but not limited to;*
  - (i) the amount, concentration and type of contaminants likely to be present as a result of the activity or in any discharge;*
  - (ii) the potential pathways for those contaminants, including any likely or potential preferred pathways;*
  - (iii) the mobility and survival rates of any pathogens likely to be in the discharge or arising as a result of the activity;*

- (iv) any risks the proposed land use or discharge activity has either on its own or in combination with other existing activities, including as a result of non-routine events;*
- (v) ensuring the water supplier is aware of any abstraction of groundwater where abstraction has the potential to have more than a minor impact on flow direction or speed and/ or hydrostatic pressure;*
- (vi) the effectiveness of any mitigation measures to avoid or mitigate risk of contaminants entering the source water and the extent to which the effectiveness of the mitigation measure can be verified;*
- (vii) notification, monitoring or reporting requirements to the Registered Drinking Water Supplier*

As noted above, HortNZ submits that the first priority should be for registered drinking water supplies to avoid locating new registered drinking water supplies in vulnerable locations, and where possible existing drinking water supplies should be relocated to less vulnerable locations. As noted above in relation to Policy 6, it is unclear whether this policy relates to existing activities, as well as new activities, and this needs to be clarified.

### **Policy 13**

*The Council will support improvement of riparian management to meet the specified timeframes (Policy 27) to provide for the values in Policies 11 and 12 by;*

- a) working with industry groups and landowner collectives to identify where riparian management is to be improved;*
- b) providing information about appropriate riparian planting that assists in meeting the values;*
- c) regulating cultivation, stock access and indigenous vegetation clearance activities that have a significant adverse effect on functioning of riparian margins in relation to water quality and aquatic ecosystem health in adjacent waterbodies;*
- d) providing funding assistance for riparian vegetation improvements; and*
- e) when making decisions on applications for resource consent to;*
  - (i) take into account benefits arising to the values in Policy 11 and 12 as a result of the activity;*
  - (ii) consider whether to waive the fees and charges required to process the application where;*
    - 1. there is significant public benefit from the activity or the nature and scale of the activity results in significant ecosystem benefits; and*
    - 2. the activity is not a requirement of any other resource consent*

HortNZ supports and encourages the council to work alongside growers to improve riparian management (where it is appropriate taking into account biosecurity matters), and as highlighted earlier, encourage the council to start providing this support as soon as they can, to enable landowners to start making improvements ahead of this plan change becoming operative. HortNZ also notes a need to potentially clear indigenous vegetation for biosecurity purposes, which is addressed in relation to the specific rules later in this submission.

### **Policy 16**

*The Council will address the risks to human health and dogs from toxic phormidium by;*

- a) regular monitoring and reporting on the incidence of algae, including toxic phormidium and nutrient concentrations and ratios of nutrients in freshwater related to phormidium establishment;*
- b) adopting applicable national guidelines for the monitoring and management of toxic algae;*
- c) supporting national investigations into the incidence of toxic phormidium, the reasons for its establishment and measures to reduce the incidence;*
- d) reducing nutrient and sediment inputs in accordance with Policies 17 and 20;*

- e) *maintain flushing flow;*
- f) *ensuring the public has information about phormidium risk, including as a result the accumulation of toxic algal mats.*

HortNZ submits that ‘flushing flow’ needs to be defined so that the impact of this policy can be understood.

## **Policy 17**

*The Council will achieve or maintain the freshwater targets or freshwater objectives in Schedule 26 with landowners, industry groups, and other stakeholders and will implement the following measures;*

- a) *establish programmes and processes through Farm Environment Plans, Catchment Collectives and Industry Programmes to ensure land managers;*
  - (i) adopt industry good practice;*
  - (ii) identify critical source areas of contaminants at both property and catchment scale;*
  - (iii) adopt effective measures to mitigate or reduce contaminant loss;*
  - (iv) prepare nutrient management plans in catchment not meeting targets for dissolved nitrogen.*

HortNZ submits that many horticultural growers have already adopted industry good practice<sup>6</sup>, and in some cases operate above it (at best management practice), and this should be acknowledged in the wording of (a)(i) and (iii). With regards to (a)(ii), HortNZ notes that if a landowner is not part of a collective, it would be difficult for them to identify critical source areas at the scale of the collective, and arguably is not necessary. Associated with this, HortNZ submits that collectives should be recognised as being an important party and key to the achievement (or not) of this policy, and the wording at the start of the policy should be amended to reflect that. The wording of (iv) is also inconsistent with the requirements of Schedule 30 (2.3) which relates to all nitrogen concentrations, not just dissolved nitrogen – from a clarity perspective the form of nitrogen needs to be made clear and consistent across the plan. HortNZ also submits that the current drafting of this policy confuses again the scale at which improvements are to be assessed. Schedule 26 identifies objectives/targets at the freshwater quality management unit scale, which is what the planning maps depict, but then also identify other ‘units’, for example on Schedule 26A the ‘Upper Tutaekuri River’, ‘Tutaekuri Tributaries’ and ‘Lower Tutaekuri River’ are labelled, but their extents not explicitly identified, nor the status of these areas defined anywhere. This needs to be clarified and made consistent across the plan. , HortNZ also submits that the management of the impacts of land use should be focused at the collective scale – not focused on an individual property basis, and the drafting of the plan change must consistently reflect this.

HortNZ also notes that the term ‘critical source areas’ is a term predominantly used by the pastoral sector to refer to sources of sediment, and these are not necessarily present on all properties – particularly flat land farmed by many horticulturalists. HortNZ suggests ii) should be amended to require the identification of sources of contaminants more broadly, and not appear so focused on sediment, or alternatively a definition of critical source area could be included, that clarifies that it relates to all sources of potential risk (ie. biological, chemical and physical).

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<sup>6</sup> As noted elsewhere in this submission, HortNZ submits that the term that should be used, and would be more consistent with terminology used elsewhere in NZ would be ‘good management practice’.

## Policy 18

*The Council will achieve or maintain the freshwater targets or freshwater objectives in Schedule 26 by;*

- a) gathering information to determine sustainable nutrient loads;*
- b) developing nutrient limits and a nutrient allocation regime if the management framework in Policy 17 is not leading to improved attribute states by the time this plan is reviewed;*
- c) regulating land use change where there is a significant risk of increased nitrogen loss;*
- d) gathering and assessing information about environmental state and trends and the impact of land use activities on these;*
- e) working with industry groups, landowners and other stakeholders to undertake research and investigation into;*
  - (i) nutrient pathways, concentrations and loads in rivers and coastal receiving environments;*
  - (ii) nutrient uptake and loss pathways at a property scale;*
  - (iii) measures to reduce nutrient losses at a property as well as catchment scale including those delivered through industry programmes.*

HortNZ fundamentally supports the staged approach that has been adopted to nutrient management in this plan change that seeks to gather further information about sustainable nutrient loads over the first phase of this plan change (ie. the next ten years), and then only develop a nutrient allocation regime if this approach is not successful. This approach enables growers to adapt their practices, and seek to reduce the environmental impact of their operations, without being constrained by the additional and arguably unnecessary restrictions (at this point in time) that a nutrient allocation regime would introduce. HortNZ believes that this staged approach is more likely to result in long term, positive environmental practice change, than the imposition of a regulatory allocation framework would achieve.

Notwithstanding the comments above, HortNZ submits that the phrase 'significant risk of increased nutrient loss' used in c) is very broad and it is unclear what it means. There also appears to be some inconsistency in the terminology used, as other objectives and policies of the plan do not refer to improvement in attribute states (as per (b)) – they refer to maintaining current state (if objectives in Schedule 26 are currently being met), or meeting the target, if the objective isn't currently met. Care needs to be taken to ensure references and terminology are used consistently throughout the plan change. HortNZ also notes both industry programmes and collectives could deliver measures to reduce nutrient loss at the property and collective scale, and e)(iii) should reflect that.

HortNZ supports policy that manages discharges of nutrients, however in our view this should be part of a multi-contaminant approach. Nitrogen cannot be substituted as a proxy for achieving other target attribute states for all land uses. For example, horticultural practices may be associated with very minor *E. coli* or sediment load discharged from a catchment. Conversely, extensive pastoral activities may have relatively low nitrogen losses, but have significant impacts on *E. coli* and sediment catchment loads. In our view regulation of land use change should consider all contaminants and consider effects of the discharge of contaminant loads on the sought outcomes.

## Policy 19

*In catchments that do not meet objectives for dissolved nutrients specified in Schedule 26, the Council will ensure landowners, landowner collectives and industry groups have nutrient management plans according to the priority order in Schedule 28.*

The term 'dissolved nutrients' is too broad, and is not consistent with the requirements stated in Schedule 30, which requires nutrient management plans in catchment or programme areas where nitrogen concentrations are not being met, and Policy 17 requires them only where dissolved nitrogen concentrations are not being met. There needs to be alignment across the plan, and clarity provided about where nutrient management plans are actually required.

## Policy 21

*The Council will remedy or mitigate the potential impact of diffuse discharge of nitrogen on freshwater quality objectives by regulating land and water use changes that modelling indicates are likely to result in increased nitrogen loss (modelled on an annual, whole of property or whole of farm enterprise basis) and in making decisions on resource consent applications, the Council will take into account:*

- a) whether freshwater quality objectives or targets are being met in the catchment where the activity is to be undertaken;*
- b) where any relevant TANK Industry Programme or Catchment Collective is in place the extent to which the changed land use activity is consistent with the Industry Programme or Collective outcomes, mitigation measures and timeframes;*
- c) any mitigation measures required, and timeframes by which they are to be implemented that are necessary to ensure the actual or potential contaminant loss occurring from the property, in combination with other contamination losses in the catchment will be consistent with meeting freshwater quality objectives, including performance in relation to industry good practice, efficient use of nutrients and minimisation of nutrient losses; and will;*
- d) avoid land use change that will result in increased nitrogen loss that contributes to water quality objectives and targets in Schedule 26 for dissolved nitrogen not being met.*

HortNZ is generally supportive of the approach that is proposed to address land use change, however fundamentally does question why nitrogen loss is used as the trigger for resource consent, when that is not the contaminant of concern in all areas. Arguably the focus or trigger for regulation of land use change should be related to the particular state of the catchment in which the land-use is occurring – this would better reflect the effects based intent of the RMA, and would for example mean that if *E. coli* is the particular contaminant of concern, and a landowner wants to convert 15ha of their property into an apple orchard, this should be enabled and encouraged, as this change would have a positive impact on *E. coli* concentrations. However, HortNZ also accepts that using nitrogen as a trigger for land use change is an approach that has been adopted elsewhere in New Zealand, and using nitrogen as a trigger for assessment may be acceptable where the assessment then goes on to consider all contaminants. HortNZ do not, however, accept it as being the over-riding criteria on whether all consents would be granted or otherwise.

With regards to the specific wording of the policy, HortNZ is unclear about the meaning of the word 'catchment' in a). Does this refer to the existing state versus the target attribute states and the surface water management units, or does it relate to the priority catchments in Schedule 28? If it is the priority catchments specified in Schedule 28, presumably the subsection relates to all contaminants? It is unclear how the spatial extent of the priority catchments identified in Schedule 28 relates to the spatial extent of the catchments delineated in Schedule 26 (and shown in the Planning Maps). The relationship between

the priority assignment, and the target attribute state for the same catchment or sub-catchment, is also unclear.

HortNZ is also concerned this policy does not adequately enable the cumulative load of contaminants discharged from upstream land uses to downstream water bodies to be accounted for. In our view this may unfairly constrain land use change in lower catchments, where rivers receive contaminant loads from all land upstream.

With regards to the specific wording of the policy, HortNZ is concerned that the use of 'avoid' in d) could potentially mean that no land use change could occur in catchments where the dissolved nitrogen limits are not being met, as arguably any increase in nitrogen loss could be considered to contribute to the dissolved nitrogen objectives/targets not being met. Presumably the load provided for within the proposed restricted discretionary activity (10ha at average leaching rates) is considered to be an increase in load per farm that is acceptable without further assessment. It is also not clear where the dissolved nitrogen limits are currently being met as these are not mapped (it is total nitrogen and nitrate yield that are mapped), therefore it is difficult to understand the impact of this policy. In any event, HortNZ has concerns about its current drafting, and its potential to effectively prohibit land use change in whole catchments, which could have dire consequences for horticultural production with the TANK catchments. HortNZ also notes that there is a lack of clarity in the drafting of the policy about whether it is just targeting nitrogen, or whether it is seeking to consider the impact of any increases in other contaminant discharges that may result from land use change. Nitrogen is used as the trigger for consent, but as noted above, HortNZ believes assessments of applications should focus on the contaminants of concern resulting from, and in the vicinity of an activity – which may or may not be nitrogen.

HortNZ also submits that the land use change policy needs to be amended to signal the positive impacts that can result from land use change. Land use change is important for supporting domestic food supply, climate change mitigation and climate change adaptation. Enabling and promoting sustainable land use change requires some flexibility so increases in some contaminants must be enabled at the farm scale, provided at the FMU or collective scale, the overall water quality outcomes across a range of values are achieved.

We also seek that policy support is provided for vegetable growing, both to recognise that crop rotation is important for soil health and is not defined as land use change, and also to recognise the importance of vegetable growing for supporting domestic food supply. As we detail later in this submission, consenting for vegetable growing must enable growers to rotate consented areas of crops across highly productive land.

We also propose that the policy looks to support land use change to activities that have lesser greenhouse gas emissions, enhance sequestration and that support climate change adaptation.

### **Policy 23**

*The Council will support the establishment and operation of Industry Programmes and Catchment Collectives and:*

- a) ensure any relevant information or expertise for making sustainable land management decisions is available to land managers;*
- b) support local investigation and water monitoring programmes where information gaps exist;*
- c) support development and use of catchment scale models that assist in identification and management of critical source areas;*
- d) support catchment and farm scale decision making to meet freshwater objectives and encourage local solutions and innovative and flexible responses to water quality issues;*
- e) work with water permit holders to encourage and support establishment of catchment collectives that address both freshwater quality objectives and stream flow management through*

*environmental management programmes as specified in Schedule 30 and Schedule 36 and within the timeframes specified in Schedule 28.*

HortNZ is pleased to see acknowledgement of the role that industry programmes can play in helping to meet freshwater objectives within the TANK Catchments, however are strongly of the view that industry programmes and collectives need to be recognised as quite different entities that, while both important to achieving improvements in freshwater throughout the TANK catchments, will contribute to that in different ways. Industry programmes, or in the case of GAP, industry assurance schemes are about the development, implementation and monitoring of farm environment plans – one tool that will help facilitate good environmental management practices. Collectives enable a collective approach to managing resources – whether that be land or water, and provide a means of sharing potentially the use of those resources (in terms of water), but also could enable sharing of any costs associated with monitoring, technical support, as well as knowledge sharing amongst landowners and the development of shared objectives and actions. HortNZ therefore suggests that Policy 23 is redrafted to delete the reference to industry programmes, as the tasks identified in the policy are roles that collectives would achieve – not industry programmes. It is important that the expectations of all TANK stakeholders about what can practically be achieved by industry programmes and collectives are clear and practicable. HortNZ also notes that the shape of industry programmes does vary, and the drafting of all policies that include reference to industry programmes does need to acknowledge this, as not all programmes are quality assurance schemes in the same way that GAP schemes are. With regards to a), one of the key roles in industry programmes is providing to members information about good management practices – arguably this is a role that sits more appropriately with them, rather than the council, and should therefore be deleted from the policy.

## **Policy 24**

*The Council will continue to work with landowners, industry groups and other stakeholders to manage land and water use activities so that they meet objectives for freshwater/aquatic ecosystems by:*

- a) further supporting the development of Industry Programmes that contribute to meeting applicable freshwater objectives and that;
  - (i) identify practices that contribute to meeting applicable freshwater objectives;*
  - (ii) specify timeframes for completion or adoption of measures to mitigate contaminant losses;*
  - (iii) ensure individual performance under an Industry Programme is monitored;*
  - (iv) provide annual reports to the Council on progressive implementation of measures identified in Industry Programmes established under Schedule 30 and progress towards meeting applicable objectives for water quality;*
  - (v) promote adoption of good industry practice;*
  - (vi) ensure that Industry Programmes are consistent with the requirements of Schedule 30;**
- b) supporting landowners to establish Catchment Collectives to develop and implement environmental management plans that contribute to meeting applicable freshwater objectives and that;
  - (i) identify and adopt measures at a property scale and collectively with other land managers that reduce contaminant losses or remedy or mitigate the effects of land use on freshwater objectives;*
  - (ii) specify timeframes for completion or adoption of measures to mitigate contaminant losses;*
  - (iii) ensure individual performance under a catchment collective is monitored;*
  - (iv) provide annual reports to the Council on progressive implementation of measures identified in landowner collectives established under Schedule 30 and progress towards meeting applicable objectives for water quality;*
  - (v) promote adoption of good agricultural practice;**

- (vi) ensure programmes prepared by a collective are consistent with the requirements of Schedule 30;
- c) Approving any Landowner Collective or Industry Programme developed under Schedule 30; d) Auditing Landowner Collective or Industry Programmes prepared and approved under Schedule 30 including auditing of member properties.

HortNZ submits that the drafting of this policy needs to be amended to better reflect how industry programmes, such as GAP work in practice, so that those industry schemes can be used by growers to satisfy the farm planning requirements of this proposed plan. With regards to subsection a), GAP schemes make a suite of practices available to growers, and they select the ones that suit their situation, and achieve the required outcome – the scheme itself does not identify what practice will contribute to meeting the applicable freshwater objectives of this proposed plan change, although catchment specific guidance is provided to help growers make these decisions. GAP Schemes also do not specify timeframes for the completion/adoption of measures to mitigate contaminant losses – again, growers determine these, taking into account council requirements/timelines, and industry requirements, as well as the specific circumstances of their operation. NZGAP and other industry GAP programmes monitor progress towards achievement of the measures, and thereby ensure that relevant actions are completed within the required timeframes. Individual performance is certainly monitored through GAP schemes through audits undertaken by a third party, the frequency of which is determined by the growers time as a member of the scheme, and then historical compliance. As noted above, measures are decided and implemented by individual growers, but progress towards implementation can be aggregated and reported for the programme. In relation to subsection c) again it is submitted that the requirements for landowner collectives and industry programmes should be separated out in Schedule 30. HortNZ questions the benefits of auditing GAP schemes, given that the scheme already involves independent third party audits of member properties. In terms of auditing the scheme itself, it is questioned what environmental risks would be identified in HortNZ’s head office in Wellington or other industry GAP programmes, although it is accepted that Council does need to recognise the schemes – some potential options for doing this are outlined in the figure below.

## Options for Regulatory Recognition



1. ISO accredited schemes (GLOBALG.A.P. currently, and EMS potential)
2. Schemes aligned with ISO (EMS currently, others industry schemes potentially)
3. Aligned with Council developed rules/processes (e.g. EMS recognition in Canterbury)
4. Follow council developed rules/processes (e.g. council auditors and irrigation schemes in Canterbury)



**Not one size fits all**

## **Policy 26**

*Where individuals are members of a Catchment Collective or Industry Programme but do not undertake their activity in accordance with the approved plan prepared in accordance with Schedule 30, or do not follow the agreed terms of membership the Council will;*

- a) provide a conflict resolution service;*
- b) where an individual is no longer, or is deemed through conflict resolution processes not to be, a member the Council will;
  - (i) require the development of a farm plan for that property within 6 months or;*
  - (ii) require an application for a land use consent to be made; c) take appropriate enforcement action.**

If growers do not meet the GAP requirements, then they are no longer a member of a GAP scheme. Scheme membership is in many cases a condition of global supply of produce which creates a significant incentive for growers to meet GAP schemes requirements. If a grower is no longer a member of a GAP scheme, then their compliance with all requirements of this plan would become a matter between the grower and the council. In the case of GAP, a conflict resolution service would not be necessary.

## **Policy 27**

*The Council will develop an implementation plan for this Plan Change with industry groups, landowners, water permit holders, tangata whenua, and other stakeholders to ensure that the land owners and lease holders are engaged in industry or landowner collective programmes or have prepared farm environmental plans within the timeframes in Schedule 28 and to ensure reporting (as specified in Schedule 30) on the milestones in Table 1 below.*

Further context around the milestones set out in Table 1 would be helpful, however suggest that the table could be moved to Schedule 30, and requirements to report on it included there. HortNZ also suggests that the development of an implementation plan is not going to ensure that landowners and leaseholders are going to meet their farm planning requirements (either individually or as part of a programme or collective). That is a compliance issue that will need to be addressed by the regional council, which HortNZ will do what it can to support. HortNZ suggests this policy is deleted, with Table 1 being moved to Schedule 30.

## **Policy 32**

*The Council will support the development of an Ahuriri Estuary Integrated Catchment Management Plan by;*

- a) improving the quality of freshwater entering the Ahuriri Estuary through the measures included in this plan; and*
- b) carrying out investigations to help better understand processes and functions occurring within the estuary and its connected freshwater bodies.*

HortNZ requests that representatives of the primary sector, alongside all other relevant stakeholder groups, are involved in development of an integrated catchment management plan for the Ahuriri Estuary to ensure that it genuinely reflects the needs and wants of all catchment stakeholders, who all have a role to play in improving the ecosystem health of the estuary.

## Policy 34

*Council will meet regularly with representatives from TANK stakeholder groups to:*

- a) review and report on the TANK implementation plan;*
- b) identify issues arising and develop measures to enable their resolution.*

Regular meetings of a group similar to that of the TANK collaborative group that worked to develop the provisions that formed the basis of this plan change is critical to enable the ongoing engagement of all sectors of the community in achieving improvements in freshwater management across the TANK Catchments. The matters that the group considers should not be restricted to the implementation plan, but over the period of this plan change, should continue to discuss and consider progress towards achieving improvements in freshwater management, and consider options as to what approaches might be taken at the time of plan review. Discussion around practical implementation issues is important, and should form part of the discussion also, but it is also important that the bigger picture continues to be reassessed, collectively and collaboratively, so that any decisions are made taking into account the views of the broad range of stakeholders that have vested interests in the TANK catchments. HortNZ submits that providing some greater detail around the membership of this group, and frequency of meetings would be helpful.

## Policy 36

*The Council recognises the actual and potential adverse effects of groundwater abstraction in the Heretaunga Plains Water Management Unit on:*

- a) groundwater levels and aquifer depletion;*
- b) flows in connected surface waterbodies;*
- c) flows of the Ngaruroro River;*
- d) groundwater quality through risks of sea water intrusion and water abstraction;*
- e) tikanga and mātauranga Māori;*

*and will adopt a staged approach to groundwater management that includes;*

- f) avoiding further adverse effects by not allowing new water use*
- g) reducing existing levels of water use;*
- h) mitigating the adverse effects of groundwater abstraction on flows in connected water bodies;*
- i) gathering information about actual water use and its effects on stream depletion;*
- j) monitoring the effectiveness of stream flow maintenance and habitat enhancement schemes;*
- k) including plan review directions to assess effectiveness of these measures.*

HortNZ submits that some new water use is proposed to be allowed through high flow takes, so f) must be reworded to enable that water to be taken. HortNZ also notes that the wording of this policy as agreed by the TANK collaborative group was to 'restrict' new allocations, rather than avoid, and HortNZ supports amendment to reflect that. HortNZ considers 'avoid' to be unnecessarily restrictive. HortNZ also opposes the requirement to 'reduce existing levels of water use' set out in g) as this precludes the use of new stored water and fails to recognise that the interim allocation limit of 90 million cubic meters (which HortNZ also opposes and is discussed later in this submission) is intended to align with previous actual water usage, however it is a modelled number and not cumulative consented actual use. HortNZ also submits that (i) should be undertaken before (h) (given that the list sets out a staged approach), as impacts should be understood before mitigation is decided upon, as otherwise a perverse outcome could arise by which water that isn't actually needed to mitigate stream depletion effects is taken, and discharged, which arguably is an unnecessary and inefficient use of water. HortNZ also notes that knowledge about the groundwater resource will improve, and we support signalling a process for new and improved information to be taken into account in decision making.

## Policy 37

*In managing the allocation and use of groundwater in the Heretaunga Plains Water Management Unit, the Council will;*

- a) adopt an interim allocation limit of 90 million cubic meters per year based on the actual and reasonable water use prior to 2017;*
- b) avoid re-allocation of any water that might become available within the interim groundwater allocation limit or within the limit of any connected water body until there has been a review of the relevant allocation limits within this plan;*
- c) manage the Heretaunga Plains Water Management Unit as an over-allocated management unit and prevent any new allocations of groundwater;*
- d) when considering applications in respect of existing consents due for expiry, or when reviewing consents, to;
  - (i) allocate groundwater the basis of the maximum quantity that is able to be abstracted during each year or irrigation season expressed in cubic meters per year;*
  - (ii) apply an assessment of actual and reasonable use that reflects land use and water use authorised in the ten years up to August 2017 (except as provided by Policy 50);**
- e) mitigate stream depletion effects on lowland streams by providing for stream flow maintenance and habitat enhancement schemes.*

The proposed interim allocation limit of 90 million cubic metres is based on a modelled estimate of peak 'actual' water use – it is not an accurate reflection of actual and reasonable water use prior to 2017. Given this, HortNZ is strongly of the view that the specific reference to '90 million cubic meters per year' should be deleted, and the wording amended to state 'an interim allocation limit based on reasonable use' – taking into account HortNZ's comments in relation to the definition of actual and reasonable provided in the 'Glossary' section of this submission. It is noted that the 90 million cubic metre limit was a non-consensus item in the plan change documentation put together by the collaborative group. HortNZ submits that locking in the modelled (ie. not even actual) water and land use pattern across the Heretaunga Plain prior to 2017 is not consistent with the sustainable management purpose of the RMA – it allows no flexibility to respond to the changing climate, and locks in a pattern of water and land use that has had some adverse effects on the environment. It is absolutely critical to the ongoing sustainability of the horticultural sector in Hawke's Bay for there to be some flexibility to allow change in land use, which will have consequential effects on water use patterns.

HortNZ also questions the avoidance of re-allocation of water that might become available within the interim groundwater allocation, within the life of this plan. HortNZ submits that this water could and should be made available if it is to be used for primary production purposes, or for use in stream flow maintenance and enhancement schemes. Arguably the re-allocation of water is not the allocation of new groundwater (and therefore would be consistent with c), and given the difficulty of gaining access to any new water, HortNZ submits that ensuring that water that has already been used can be re-allocated to be used for primary production purposes will assist the survival of the horticultural industry in the TANK Catchments.

### **Policy 38**

*The Council will restrict the re-allocation of water to holders of permits to take and use water in the Heretaunga Water Management Unit issued before 2 May 2020 and will review permits or allocate water according to the plan policies and rules either:*

- a) upon expiry of the consent; or*
- b) in accordance with a review of all applicable permits within ten years of; whichever is the sooner.*

HortNZ questions the resource management basis of restricting re-allocation to existing (as at 2 May 2020) water permit holders, particularly given suggestion above that re-allocated water could be allocated for stream flow maintenance and habitat enhancement schemes – these may well be entities that do not currently exist, and therefore do not currently hold water permits.

### **Policy 39**

*When assessing applications to take groundwater in the Heretaunga Plains Water Management Unit the Council will:*

- a) either;*
  - (i) require abstraction to cease when an applicable stream flow maintenance scheme trigger is reached; or*
  - (ii) enable consent applicants to develop or contribute to stream flow maintenance and habitat enhancement schemes that;*
    - 1. contribute flow to lowland rivers where groundwater abstraction is depleting stream flows;*
    - and*
    - 2. improve oxygen levels and reduce water temperatures;*
- b) assess the relative contribution to stream depletion from groundwater takes and require stream depletion to be off-set equitably by consent holders while providing for exceptions for the use of water for essential human health; and*
- c) enable permit holders to progressively and collectively through Water User Collectives develop and implement flow maintenance and habitat enhancement schemes as water permits are replaced or reviewed, in the order consistent with water permit expiry dates.*

HortNZ supports maintaining (a)(i) and providing ongoing ability for individuals to manage their own effects. HortNZ also supports the ability for stream depletion effects to be managed collectively, but believes it will be extremely difficult for schemes to be developed by consent applicants, and therefore submits that these schemes are developed in a progressive manner by HBRC – based on water permit expiry dates (as seems to be indicted by c) in terms of a timing approach) ie. they focus on development of schemes in those areas first, and then tackle the next area that expires and so on. HBRC hold all the relevant scientific and technical information required to operationalise such schemes therefore it is critical that HBRC takes on a central role in their development.

This potentially avoids issues with conditions going onto water permits if schemes aren't set up before replacement consents are issued, and also provides a plan, in that schemes simply can't be set up everywhere straight away, due to the time and effort that is required in establishing them. Also, there are physical limitations on where schemes will actually work, so some water permit holders will not be able to physically be part of a scheme, and potentially therefore have to either cease take at minimum flow, or just contribute financially and off-set their effect that way, but in any event, getting systems and processes set up to facilitate that will take time, and there remains considerable uncertainty about how this will be undertaken.

HortNZ also notes the importance of ensuring that the stream depletion calculator, that will be used to calculate the stream depletion effect of each take, has been developed using robust scientific approaches, and it has been adequately peer reviewed, given how significant the impact of its calculations are going to be for water permit holders, therefore there needs to be a high level of confidence across the community that (acknowledging that it is a model) it is appropriate, and that where improved information becomes available through monitoring is used to improve and update the tool

HortNZ understands that HBRC will be submitting a proposed alternative approach to the requirements in Policy 39. HortNZ supports in principle a jointly-funded collective stream flow maintenance schemes on suitable lowland streams, facilitated by HBRC.

#### **Policy 41**

*The Council will remedy the stream depletion effects of groundwater takes in the Heretaunga Plains Water Management Unit on the Ngaruroro River, in consultation with mana whenua, land and water users and the wider community through:*

- a) further investigating the environmental, technical, cultural and economic feasibility of a water storage and release scheme to off-set the cumulative stream depletion effect of groundwater takes;*
- b) if such a scheme is feasible, to develop options for funding, construction and operation of such a scheme including through a targeted rate; and*
- c) if such a scheme is not feasible, to review alternative methods and examine the costs and benefits of those.*

HortNZ opposes the current wording of this policy, as 'remedying' the effects of all groundwater takes on the Ngaruroro would be a huge undertaking, and it is unclear whether from an environmental perspective it would be beneficial, nor whether it would be in the best interests of the broader TANK community. HortNZ submits that the wording of the policy needs to be amended to reflect the substantial uncertainties that exist about whether this would be feasible and/or appropriate.

#### **Policy 47**

*When considering applications for resource consent, the Council will ensure water is allocated and used efficiently by:*

- a) ensuring that the technical means of using water are physically efficient through;*
  - (i) allocation of water for irrigation end-uses based on soil, climate and crop needs;*
  - (ii) requiring the adoption of good practice water use technology and processes that minimise the amount of water wasted; and*
  - (iii) the use of water meters;*
- b) using the IRRICALC water demand model if available for the land use being applied for (or otherwise by a suitable equivalent approved by Council) to determine efficient water allocations for irrigation uses;*
- c) allocating water for irrigation on the basis of a minimum water application efficiency standard of 80% and on a reliability standard that meets demand 95% of the time;*
- d) requiring all non-irrigation water takes (except as provided by Policy 50 for municipal and papakāinga supplies) to show how water use efficiency of at least 80% is being met and is consistent with any applicable industry good practice;*
- e) requiring new water takes and irrigation systems to be designed and installed in accordance with industry codes of practice and standards;*
- f) requiring irrigation and other water use systems to be maintained and operated to ensure on-going efficient water use in accordance with any applicable industry codes of practice.*

HortNZ submits that the wording of this policy should be amended to be better aligned with how the irrigation related terms are used within the irrigation industry, which will improve the clarity of the policy. With regards to subsection c), HortNZ submits that “a minimum application efficiency standard of 80%” is not actually a standard and is not a widely accepted concept. There appears to be confusion between application efficiency and distribution uniformity (which is a measurable quantity and can be considered a standard), and this needs to be clarified by changing the reference to distribution uniformity, and including a definition.

## Policy 48

*When considering any application to change the water use specified by a water permit, or to transfer a point of take to another point of take, to consider:*

- a) declining applications where the transfer is to another water management zone unless;
  - (i) new information provides more accurate specification of applicable zone boundaries;*
  - (ii) where the lowland tributaries of the Karamū River are over-allocated, whether the transfer of water take from surface to groundwater provides a net beneficial effect on surface water flows;**
- b) effects on specified minimum flows and levels or other water users’ access to water resulting from any changes to the rates or volume of take;*
- c) any alteration to the nature, scale and location of adverse effects on the water body values listed in Schedule 25 and in the objectives of this Plan;*
- d) effects of the alteration to the patterns of water use over time, including changes from seasonal use to water use occurring throughout the year or changes from season to season;*
- e) except where a change of use and/or transfer is for the purpose of a flow enhancement or ecosystem improvement scheme, declining applications to transfer water away from irrigation end uses in order to protect water availability for the irrigation of the versatile land of the Heretaunga Plains for primary production especially the production of food;*
- f) in Water Quality Management Units that are over-allocated, ensuring that transfers do not result in increased water use and to prevent the transfer of allocated but unused water;*
- g) declining applications for a change of use from frost protection to any other end use;*
- h) enabling the transfer of a point of take and change of water use to municipal water supplies, including for marae and papakāinga , (not including transfer to industrial uses above 15m<sup>3</sup>/day) from any other use for the efficient delivery of water supplies and to meet the communities’ human health needs for water supply, subject to clause (b).*

HortNZ submits that it is unclear what/where the ‘water management zones’ are, and therefore difficult to understand the potential implications of the policy on horticultural growers. Freshwater Management Units are what is depicted on the TANK planning maps, not water management zones. This may be a terminology issue, or require additional plans to be prepared and form part of the plan change, although from a plan usability perspective, a proliferation of different management units is not helpful to plan implementation, and should be avoided if possible. It is also unclear what is actually meant by ‘change in water use’ - does that mean a change to the conditions of consent, such as a change in rate of take, or does it mean a change of use in terms of the crop that is being irrigated, and if so, what is the extent of change that constitutes a change in the context of this policy – is it a change in over 10ha to be consistent with the land use change regulations, or does it mean something else?. HortNZ encourages HBRC to adopt a pragmatic approach in this regard, and stipulate water use in general terms, such as ‘irrigation of horticultural crops’, rather than being overly prescriptive. HortNZ strongly supports the priority afforded to irrigation of versatile land that is afforded by subsection e). Also in relation to g) given the changing climate, frost protection may no longer be necessary in some locations, or it may be required

less often, yet water demand for irrigation may increase, and could potentially be met by a change of use from frost to irrigation.

#### **Policy 49**

*When making decisions about applications for resource consent to take and use water, the Council will set common expiry dates for water permits to take water in each water management zone, that enables consistent and efficient management of the resource and will set durations that provide a periodic opportunity to review effects of the cumulative water use and to take into account potential effects of changes in:*

- a) knowledge about the water bodies;*
- b) over-allocation of water;*
- c) patterns of water use;*
- d) development of new technology;*
- e) climate change effects;*
- f) efficacy of flow enhancement schemes and any riparian margin upgrades; and the Council;*
- g) will impose consent durations of 15 years according to specified water management unit expiry dates. Future dates for expiry or review of consents within that catchment are every 15 years thereafter.*
- h) will impose a consent duration for municipal supply consistent with the most recent HPUDS and will impose consent review requirements that align with the expiry of all other consents in the applicable management unit;*
- i) may grant consents granted within three years prior to the relevant common catchment expiry date with a duration to align with the second common expiry date, except where the application is subject to section 8.2.4 of the RRMP).*

HortNZ is supportive of enabling where possible large scale water storage projects and suggests if one was to proceed, it would require considerable investment, and would therefore reasonably seek a consent term of more than 15 years. It is suggested that a sub-section is included providing an exemption from the 15 years for water storage projects (similar to (h)).

#### **Policy 51**

*When making water shortage directions under Section 329 of the RMA, occurring when rivers have fallen below minimum flows and water use has decreased or ceased according to permit conditions, the Council will establish and consult with an emergency water management group that shall have representatives from Napier City and Hastings District Councils, NZ Fire Service, DHB, iwi and MPI, to make decisions about providing for water uses in the following priority order;*

- a) water for the maintenance of public health;*
- b) water necessary for the maintenance of animal welfare;*
- c) water essential for community well-being and health;*
- d) water essential for survival of horticultural tree crops;*
- e) uses where water is subject to seasonal demand for primary production;*
- f) uses for which water is essential for the continued operation of a business, except where water is subject to seasonal demand for primary production or processing. The following uses will not be authorised under a water shortage direction:*
- g) use of water not associated with the continued operation of a business or community well-being;*
- h) non-essential amenity uses such as private swimming pools and car washing.*

*Takes not subject to any restrictions are:*

- i) firefighting uses;*
- j) non-consumptive uses;*

HortNZ supports the recognition of the need to enable water to be made available to irrigate horticultural tree crops to ensure their survival.

## **Policy 52**

*The Council will phase out over-allocation by;*

- a) preventing any new allocation of water (not including any reallocation in respect of permits issued before 2 May 2020;*
- b) for applications in respect of existing consents due for expiry or when reviewing consents, to;*
  - (i) allocate water according to demonstrated actual and reasonable need (except as provided for by Policy 50)*
  - (ii) impose conditions that require efficiency gains to be made, including through altering the volume, rate or timing of the take and requesting information to verify efficiency of water use relative to industry good practice standards;*
- c) provide for, within the duration of the consent, meeting water efficiency standards where hardship can be demonstrated;*
- d) reducing the amount of water permitted to be taken without consent, including those provided for by Section 14 (3)(b) of the RMA, except for authorised uses existing before 2 May 2020;*
- e) encouraging voluntary reductions, site to site transfers (subject to clause (f)) or promoting water augmentation/harvesting;*
- f) prevent site to site transfers of allocated but unused water that does not meet the definition of actual and reasonable use;*
- g) enabling and supporting permit holders to develop flexible approaches to management and use of allocatable water within a management zone including through catchment collectives, water user groups, consent or well sharing or global water permits;*
- h) enabling and supporting the rostering of water use or reducing the rate of takes in order to avoid water use restrictions at minimum or trigger flows.*

HortNZ submits that the wording of a) needs to be amended to make it explicitly clear that new water is available for allocation from high flows. As outlined elsewhere in this submission, HortNZ does not support actual water being used as the basis for water re-allocation at this time given the raft of issues with the availability of accurate water meter data, and where it does exist, how accurately it reflects future water use. HortNZ submits that the focus should instead be on reasonable water needs – requiring amendments to the drafting of (b)(i). HortNZ supports the requirements for irrigators to operate at (or above) good management practice, however note that irrigation systems are designed to operate at a specific flow rate – the council cannot simply change the rate at which a system must operate – that would require considerable redesign and potentially redevelopment of irrigation infrastructure which is arguably not justified from an effects perspective. With regards to subsection (c), HortNZ questions what is hardship - some clarity around this should be provided to help water users understand whether or not they could seek some dispensation. HortNZ generally supports (d) but does provide some further comment on this in relation to TANK 7 and 8, and the need to provide water for irrigation of permanent horticultural crops during times of water restrictions. With regards to (f), HortNZ submits that this needs rewording – water permits that have not been used at all, should have lapsed, and therefore would not be available for transfer, and given HortNZ's arguments around the inappropriateness of needing to demonstrate actual use at this time, it follows that we submit that all water permits should be able to be

transferred (if they have been exercised) and the volume of water to be transferred is reasonable for its intended use.

### **Policy 53**

*When considering applications to take water for frost protection, the Council will avoid, remedy or mitigate actual and potential effects of the take on its own or in combination with other water takes;*

- a) from groundwater in the Heretaunga Plains Water Management Unit on;
  - (i) neighbouring bores and existing water users;*
  - (ii) connected surface water bodies;*
  - (iii) water quality as a result of any associated application of the water onto the ground where it might enter water;**
- b) from surface water on;
  - (i) instantaneous flow in the surface water body;*
  - (ii) fish spawning and existing water users;*
  - (iii) applicable minimum flows during November to April;*
  - (iv) water quality as a result of any associated application of the water onto the ground where it might enter water;**

*By;*

- c) taking into account any stream depletion effects of groundwater takes;*
- d) imposing limits in relation to minimum flows or groundwater levels;*
- e) requiring water metering, monitoring and reporting use of water for frost protection.*

HortNZ submits that given the new understanding that all groundwater takes within HPWMU are having some effect on surface water bodies, what does a)(ii) actually require - the augmentation of flow? Given that frost protection generally occurs at times when flows in surface water bodies are well above minimum flows, the effects basis for any augmentation is questionable, and HortNZ submits it is not justified given the limited period of time frost protection occurs for. With regards to subsections (a)(iii) and (b)(iv), when water is applied for frost protection purposes, it is applied to the crop (ie. apples) to protect them – it is not applied onto the ground, although obviously there will be some fall of water on to ground. Rates at which water is applied for frost protection purposes relate to the severity of the frost event expected. Frost damage can result not only in damage to the crop for the coming season, but also productivity of crop in subsequent years. It is critically important that the ability of horticultural growers to take water for frost protection purposes is not unnecessarily impeded, and imposing any limitation in relation to minimum flows or groundwater levels would do this, therefore we suggest that (d) is deleted. Frost protection is only undertaken when necessary, based on the best available weather forecasts, and provisions must enable it.

### **Policy 54**

*When assessing applications to dam water and to take water from the dam impoundment, the Council will avoid, remedy or mitigate adverse effects of;*

- a) potential changes to water quality arising from subsequent changes to land use activities that may occur as a result of water being allocated for take and use from the dam and whether relevant freshwater quality objectives can be met;*
- b) the dam and any associated lake or reservoir, and any effects of the volume, velocity, frequency, and duration of flow releases from the dam, either by itself or cumulatively with other storage structures or dams, on;
  - (i) the uses and values for any water body identified in the objectives or Schedule 25;**

- (ii) water levels and flows in connected water bodies, including lakes and wetlands;
  - (iii) water quality, including effects on temperature and management of periphyton in connected water bodies;
  - (iv) river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat, including in relation to the storage impoundment;
  - (v) groundwater recharge;
  - (vi) downstream land, property and infrastructure at risk from failure of the proposed dam;
  - (vii) other water users;
  - (viii) downstream river bed stability, including through sediment transfer and management of vegetation in river beds;
- c) whether there are practicable alternatives; and, except as prohibited by Policy 58, will limit the amount of flow alteration so that the damming of surface water either on its own or in combination with other dams or water storage in a catchment does not cumulatively adversely affect the frequency of flows above three times the median flow by more than a minor amount and provided that any dam in combination with other dams or high flow takes shall not cause changes to the river flow regime that are inconsistent with specified flow triggers.

HortNZ strongly supports provisions in the plan change that enable high flow water to be taken and stored for subsequent use. Notwithstanding that, HortNZ submits that the assessment of impacts on water quality in a policy that relates to applications to take and dam water is tenuous, and if considered a matter that needs to be considered, then should be addressed through a separate policy that relates to land use – it is not the use of water that has an impact on water quality, it is the nature of the land use on the land to which water is applied that has an impact on water quality, and it is important that this distinction is acknowledged. The justification for c) is also not clear, given that this policy relates to water permits, rather than discharge permits. There is no expectation in the RMA that an alternatives assessment is done for any type of activity other than a discharge permit, therefore HortNZ submits that this is deleted.

## **Policy 55**

*When assessing applications to take water for off-stream storage or to take water from the impoundment the Council will avoid remedy or mitigate adverse effects of;*

- a) potential changes to water quality arising from subsequent changes to land use activities as a result of water being allocated for take and use from the impoundment and whether relevant freshwater quality objectives can be met;
- b) the magnitude, frequency, duration and timing of water takes either by itself or cumulatively with other storage structures or dams, on;
  - (i) the uses and values for any water body identified in the objectives;
  - (ii) water levels and flows in connected water bodies, including lakes and wetlands;
  - (iii) water quality, including effects on temperature and management of periphyton in connected water bodies;
  - (iv) river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat, including in relation to the storage impoundment;
  - (v) groundwater recharge;
  - (vi) downstream land, property and infrastructure at risk from failure of the proposed storage structure;
  - (vii) other water users; and will limit the amount of flow alteration so that the taking of surface water does not cumulatively adversely affect the frequency of flows above three times the median flow by more than a minor amount and provided that;
  - (viii) the high flow take ceases when the river is at or below the median flow;
  - (ix) such high flow takes do not cumulatively exceed the specified allocation limits;

*(x) any takes to storage existing as at 2 May 2020 will continue to be provided for within new allocation limits and subject to existing flow triggers.*

HortNZ submits that off-stream storage is by definition not connected to any other water body, therefore (b)(ii)-(iii) will not apply, and therefore don't need to be included in this policy. HortNZ also note in relation to (b)(ix) there are not specified allocation limits for all water bodies, and while HortNZ suggests that there could be, if this is not enabled within the plan, then the policy needs to be reworded to ensure that it is clear that high flow takes are not just restricted to the two catchments (Ngaruroro and Tutaekuri) for which allocation limits have been specified in Schedule 32. As noted above in relation to Policy 55, HortNZ submits that the assessment of impacts on water quality in a policy that relates to applications to water takes is tenuous, and if considered a matter that needs to be considered, then should be addressed through a separate policy that relates to land use – it is not the use of water that has an impact on water quality, it is the nature of the land use on the land to which water is applied that has an impact on water quality, and it is important that this distinction is acknowledged.

### **Policy 59**

*The Council will allocate 20% of the total water available at times of high flow in the Ngaruroro or Tūtaekurī River catchments for abstraction, storage and use for the following activities;*

- a) contribution to environmental enhancement that is in addition to any conditions imposed on the water storage proposal;*
- b) improvement of access to water for domestic use by marae and papakāinga;*
- c) the use of water for any activity, provided that;*
  - (i) it includes contribution to a fund managed by the Council in consultation with mana whenua;*
  - and*
  - (ii) the fund will be used to provide for development of Māori wellbeing;*
  - (iii) the contribution to the fund is proportional to the amount of reserved water being taken and any commercial returns resulting from the application*
- d) the development of land returned to a Post-Settlement Governance Entity (PSGE) through a Treaty Settlement. And in making decisions on applications to take and store this water the Council will;*
- e) require information to be provided that demonstrates how the activity will provide for Māori economic, cultural or social well-being;*
- f) have regard to the views of any affected PSGE or iwi authority arising from consultation about the application and any assessment of the potential to provide part, or all of the 20% high flow allocation;*
- g) have regard to any relevant provisions for the storage and use of high flow allocation water for Māori development in any joint iwi/hapū management plans relevant to the application (where more than one PSGE, iwi/hapū is affected, the iwi management plan must be jointly prepared by the affected iwi/hapū).*

HortNZ submits that the flow allocation limit should be designed to mitigate impacts on the flow regime, consistent with the NPSFM. That being the case, HortNZ do not understand why compensation would be required. Usually compensation would only be paid, following a hierarchy of managing effects: avoid, mitigate, remedy, offset and then compensation. HortNZ are not opposed to a portion of the high flow allocation being reserved for Maori, and support transfers, to enable the water to be utilised in the case where Maori were not able to utilise the allocation, at the time. A payment can be made from one party to another, as part of the terms of a transfer, but this is a private financial arrangement and should not be guided by regional policy.

## Policy 60

*When making decisions about resource consent applications to take and store high flow water, the Council will take into account the following matters:*

- a) whether water allocated for development of Māori well-being is still available for allocation;*
- b) whether there is any other application to take and use the high flow allocation for development of Māori wellbeing relevant to the application;*
- c) the scale of the application and whether cost effective or practicable options for taking and using the high flow allocation for Māori development can be incorporated into the application;*
- d) the location of the application and whether cost effective or practicable options for including taking and using water for Māori development can be developed as part of the application;*
- e) whether there has been consultation on the potential to include taking and using all or part of the water allocated for Māori development into the application;*
- f) whether it is the view of the applicant that a joint or integrated approach for the provision of the high flow water allocated to Māori development is not appropriate or feasible, and the reasons why this is the case.*

HortNZ submits that an amendment is required to make it clear that Policy 60 is only relevant to consideration of applications under Policy 59.

## Rules

### TANK 1

Many growers have raised questions about what the 10ha relates to – does that relate to effective area, title size, property size, enterprise size, area that they actively farm? HortNZ submits that this could be addressed by (throughout the plan change) using the term ‘farm’ instead of the terms ‘farm properties’ or ‘farming enterprises’. We have proposed a definition in the Glossary section of this submission, which aligns with the definition of ‘farm’ set out in the NES FW 2020.

### TANK 3

HortNZ submits that where possible consistency with national regulations should be achieved where there may potentially be conflict. HortNZ also submits that a definition of ‘active formed channel’ needs to be included to aid interpretation and consistency of implementation of this rule. HortNZ notes that this is not consistent with approach taken in the Tukituki Plan Change, which arguably is not particularly helpful from a regional consistency perspective.

### TANK 5

HortNZ submits that if collectives are genuinely to be enabled to help manage land use in an integrated way, then a) should be reworded to make the ‘trigger’ for consent a change in land use over more than 10% of the land area managed by the collective. This would create a genuine incentive for landowners to become part of collectives, and provide a degree of flexibility that would enable rotation of certain crops, that is necessary from a good management perspective for both soil health and disease management reasons, but also reflects the reality of the world in which we live in which customer preferences and trade arrangements, to name a few influences, change, and these have consequential impacts on what is grown across our landscape. To enable Hawke’s Bay’s horticultural sector to remain competitive, some changes in land use have to be enabled, and HortNZ believes this can be done, while simultaneously ensuring that water quality objectives/targets are met on a collective basis.

To aid interpretation of the suite of provisions that relate to production land use change (TANK 5, TANK 6, Schedule 29 and Schedule 30) HortNZ suggests that a definition for 'land use change' is included, and have set one out in the 'Glossary' section of this submission.

For assessing the water quality contaminant load associated with vegetable growing, the assessment framework must consider the full rotation (including inter-year variability) which for the process vegetable/arable rotations frequently grown in Hawkes Bay is approximately 5 years. The assessment must compare the vegetable rotation with all suitable highly productive land that the rotation will be able to rotate onto.

As discussed in our submission on Policy 21, we do not support the 'avoid' wording of 21d with regard to nitrogen, because in our view discretionary consents should be assessed against the full range of contaminants and potential impacts on the outcomes sought. However, we would support a matter of control within this rule reflecting the wording in policy 21 d.

## **TANK 6**

HortNZ supports the proposed policy pathway for relatively small changes in land use where average annual nitrogen loss is within the loads provided for within Schedule 29. If, as we provide further detail on in relation to Schedule 29, the schedule was to be simplified and a standard N loss of, for example 250kgN permitted, then we submit that the rule would need to make clear that if a collective was being assessed under this rule, then the permitted loss could be added up for the number of farms that were part of the collective (ie. if 10 farms were part of a collective, then the permitted N loss would be 2500kgN).

HortNZ opposes the current wording of matter for discretion 1, as Schedule 29 does provide for a small increase in nitrogen, therefore requiring assessment against Policy 21 (which HortNZ opposes the current wording of) that seeks to 'avoid' land use change where water quality objectives and targets for dissolved nitrogen were not being met.

In addition to providing a consenting pathway for relatively small changes in land use that meet the increase in load criteria, we recommend an additional condition is added to enable a small area of vegetable expansion to occur, that is not subject to the load requirements in Schedule 29, or the avoid Policy 21d (noting again HortNZ's opposition to the current drafting of that provision). This increase is to enable vegetable rotations to expand to meet domestic food supply needs. This small increase would be tied to population growth, enabling a 10% increase in the existing footprint over 10 years. Any expansion over and above the 10% area constraint, would be likely serving increased export demand, and would be subject to the same water quality criteria as all other land uses. The vegetable rotations within the Hawke's Bay are relatively extensive including arable crops and pasture within rotations as well as vegetables. The water quality impact of enabling small scale land use change to provide for domestic food supply expansion will have a negligible impact on water quality outcomes.

## **New TANK6A required**

HortNZ submits that an additional land use rule needs to be added to provide a clear consenting pathway for activities that do not comply with TANK6.

## **TANK 7 & 8**

HortNZ generally supports the reduction of permitted water takes, however, growers have advised that historically, during periods of low flow when water permits linked to minimum flows have been unable to be used, many have relied on the permitted take of up to 20m<sup>3</sup> to irrigate horticultural tree crops to help them survive. This is a critically important use, that should continue to be enabled, therefore HortNZ submits that an exclusion is provided within both TANK 7 & 8. Such takes could be considered to be existing, because they have occurred prior to 2 May 2020, however as such takes are not ongoing, their status is not entirely clear, therefore HortNZ submits that an additional exclusion should be added to subsection b) takes up to 20 cubic metres per property per day to aid the survival of permanent horticultural crops. Another option would be adding to Schedule 31 a specific allocation of water that can be taken below minimum flows solely for the purpose of providing for rootstock survival. This option is set out in more detail in relation to Schedule 31.

## **TANK 9 & 10**

As outlined elsewhere in this submission, HortNZ submits that the quantity of water taken and used for irrigation should be the reasonable amount – as determined based on the quantity specified on the expiring water permit, or Irricalc – whichever is the lesser, and include provision for root stock survival for the irrigation of tree crops. HortNZ's position on this is informed by the feedback of many, many growers who have expressed concern about issues with the availability of water meter data, which makes it impossible for them to demonstrate actual use. Alternatively, growers water use patterns have changed over time – for example orchard redevelopment that has seen a significant increase in the planting of shallower rooting stocks, has necessitated a requirement to irrigate less water, more regularly, because the shallower roots cannot access water as far down the soil profile. This necessitates a need to more accurately observe soil moisture levels, and irrigate as informed by that information – which has positive benefits from both a water use efficiency perspective, as well as a nutrient management perspective. Many growers have also emphasised that they did not use their highest volumes of water during the 2012/13 drought for a raft of reasons, including the stage of their crop development (ie. it did not require additional irrigation when conditions became dry, or in some cases, had already been harvested by then). What is meant by 'authorised major infrastructure developments over time' referred to in Subsection 2) of the matters for discretion is also unclear. Arguably orchard re-development is not necessarily 'authorised', or if it is, in many cases the 'authorisation' may be from the district council and relates to structures on the property, such as the unique and successful hydroponic berry farms established in multiple locations across the TANK catchments.

HortNZ supports the inclusion of the option to cease or reduce take when trigger level is reached, although questions why the cease take is not linked to the minimum flow? HortNZ submits that the inclusion of options is important, and while there are clearly advantages to joining a stream maintenance and habitat enhancement scheme, but this may not be possible or practical in every instance.

## **TANK 12**

HortNZ opposes the proposed 'prohibited' status for new takes that don't comply with TANK 11, and strongly suggests that a status of non-complying would be more appropriate, given the substantial number of unknowns related to future water demand within the TANK Catchments. Arguably non-complying activity status is anticipated for exactly activities of that type – that are not necessarily anticipated at the time a plan is drafted, but it is inappropriate to prohibit – which HortNZ submits it is.

HortNZ also notes that the decision from the collaborative group on this matter was non-complying, rather than prohibited, activity status.

### **TANK 18**

HortNZ questions the discretionary status of such applications, and suggests that this doesn't incentivise joining a stream flow maintenance and habitat enhancement scheme. A restricted discretionary status provides a slightly higher level of comfort for an applicant, and also through identification of matters of discretion, provides clearer guidance about what information needs to be provided in a consent application, which has material impacts on cost and time associated with preparing them.

### **TANK 19, 20, 22 & 23**

HortNZ submits that the term rural building used across TANK 19 and 20 is too broad, and not defined therefore it is very difficult to understand what the impact of these rules will be on horticultural growers, who own many buildings in rural areas. With regards to the wording of Condition b) in TANK 19, unless a reticulated stormwater network is available, then an onsite stormwater discharge must occur – even until a planned network is constructed. Condition b) needs to be amended to reflect this.

### **RRMP 7**

HortNZ submits that there needs to be an additional exclusion included in (f) where the clearance is necessary for biosecurity purposes. This rule change also effectively prohibits any cultivation of land within 5m-15m buffer zones (depending on slope) around waterbodies, which unduly compromises the development or redevelopment of permanent horticultural crops where headlands may be adjacent to waterbodies and may require cultivation on an infrequent basis to facilitate machinery movements.

### **RRMP 13**

Clarity is needed about the period of time over which the limitation to 100m<sup>3</sup> applies – it is assumed it is at one time.

### **RRMP 32 & 33**

HortNZ suggests given the low level of knowledge about the quality of drainage water that the proposed changes to the rule are deleted, and their inclusion revisited at the time the plan is reviewed. In addition, the following comments about the drafting of Rule 33A are offered: c) why is 10ha used as a threshold as arguably the quality of a discharge is not necessarily related to the area it drains. The volume of discharge would decrease, but if it's bad its bad, and should be subject to same quality standards as other discharges (Rule 33A). HortNZ also submits that there are potentially issues here where drains go through multiple properties and therefore management of land contributing to point of discharge is shared.

### **RRMP 62a**

As currently drafted, the rule would be difficult to assess against – for example what does 'downstream' of affected stream mean in (d)(i). HortNZ submits that redrafting is required to aid interpretation.

## Schedules

### **Schedule 26 - Freshwater Quality Objectives**

The maps referred to in Schedule 26 are for large catchments, described as a freshwater quality management units. HortNZ submits that it is unclear if these freshwater quality management units are the equivalent to Fresh Water Management Units, as defined in the NPS Freshwater Management. It is also unclear where the target attribute states are to be achieved – if this is at all current monitoring locations, or at a subset of monitoring sites at a smaller sub-catchment scale. The maps would be improved by including the locations of the monitoring sites and the current attribute state at these sites, so it is clearer whether the outcomes sought are to maintain or improve water quality, and where this is required. HortNZ also notes that the wording of the proposed plan change refers to water quality objective and attribute state. The NPSFM 2020 includes new definitions, including the term ‘target attribute states’. We recommend the wording in the plan is updated to align with the NPSFM 2020 wording.

### **Schedule 28 – Priority Catchments**

As currently drafted, it appears that the only material impact of Schedule 28 is that it sets the priority in which farm plans need to be completed. The scale at which the priority applies is unclear, and it is critically important that this is clarified. The schedule refers to ‘catchments’, however, the accompanying maps that relate to the schedule (eg. Map 1. Priority Catchments Sediment Yield) maps at a more refined scale than a catchment although it is unclear what that scale is – is it sub-catchments? The scale at which the schedule is supposed to be applied needs to be really clear, and the terminology used consistent. It would also be helpful if it was explicitly stated what happens if a catchment has different priority ‘ratings’ for the different water quality issues identified in the table (ie. is high priority for sediment yield, but low priority for TN yield). It is assumed that if a farm is within a high priority area for any issue, then the farm plan must be completed within 3 years of the plan becoming operative, however it would be useful to clearly articulate that.

HortNZ also submits that the inclusion of ‘a source protection zone’ as a basis for identification as a priority catchment seems out of place, particularly given the level of protection and consideration that activities within source protection zones are afforded by other provisions proposed as part of the plan change, and the currently very large extent of Source Protection Zones (which HortNZ has raised concerns about in other sections of this submission). HortNZ submits that ‘5. Source Protection Zones’ is deleted from this Schedule. References/links to the specific planning maps that identify the priority catchment must also be included for plan usability, even if the maps are updated as necessary to reflect changes in status. From a plan readability perspective, HortNZ also notes that it is not clear why the nutrients identified as high priorities in Schedule 28 have been selected? That should be clearly set out in an objective or policy of the plan.

### **Schedule 29 – Land Use Change**

HortNZ submits that for consistency the term ‘production land use change’ should be used, and a definition of that term must be added to the plan (as noted in relation to TANK 6).

Overall we support the concept in this table, to the effect that land use change should be related to contaminant load. We suggest that the assessment could be simplified to provide a single load that all assessments are compared against, for example 250 kg.

HortNZ submits that for vegetable/arable crop rotations it is important that the values provided in this table, which are average annual values, are not used as maximum annual values. If the values were

treated as maximum annual values, it would reduce the baseline area of crop rotations by preventing inter-annual variability in crop area that is necessary to support plant and soil health within crop rotations.

If land use related N loss is to be maintained, the kiwifruit industry opposes the values included in Table 1 for kiwifruit and will provide updated nitrogen loss numbers for kiwifruit as part of evidence. HortNZ is also working to develop nitrogen loss numbers for vegetable rotations and will submit these numbers for inclusion into Table 1 (if it maintained) as part of evidence.

### **Schedule 30 – Landowner Collective, Industry Programme and Farm Environment Plan**

HortNZ supports the intent of the plan change to recognise and enable growers to utilise industry programmes, such as the GAP schemes, to meet their farm plan requirements, and also support the idea of collectives working together to address local water quality and environmental objectives. However, as currently drafted Sections A and B of Schedule 30 that relate to both Catchment Collectives and Industry Programmes are confusing and difficult to follow, and HortNZ submits that they should be pulled apart, and the requirements for each (Collectives and Industry programmes) set out separately. It is HortNZ's view that the farm plan requirements should be consistent across all three avenues by which a landowner can complete them – as part of a collective, through an industry scheme, or individually.

HortNZ has invested a significant amount of time and money in the development of NZGAP, which is a certification scheme that provides assurance of the safe and sustainable production of fruit and vegetables in New Zealand. The scheme involves auditing by a third party, which provides a level of independence and robustness that not all industry schemes operating in New Zealand currently have, but is a cornerstone of the GAP schemes, which any grower exporting produce internationally must be part of. There are a number of GAP schemes including GLOBALGAP, NZGAP, Zespri GAP, and the GAP scheme/s to which a grower must be accredited are driven by markets.

In HortNZ's view, Industry Programmes provides an excellent means of farmers meeting the farm plan requirements, through recognition of plans they already have, to which an 'environmental management system' bolt-on can be added, which will meet the requirements of the TANK plan. This has been done in other regions of the country and worked really successfully, and HortNZ is of the view that enabling growers to utilise existing programmes that they are already part of will have multiple benefits – including that they are used to having to run their operations in accordance with the plans. Industry Programmes do not however provide a means of collectively managing the environmental effects of multiple properties/enterprises. A grower that is GAP accredited (so is part of an industry programme, and utilises that to meet their farm planning requirements), could also be part of a collective group – together with other landowners, who may or may not be GAP accredited. Alternatively a group of landowners that are all GAP accredited may choose to form a collective and work together to address the environmental effects of their operations, but that is unlikely to be the case in many instances, given the way that land uses are spread across the TANK catchments.

Collectives are about managing environmental effects of land use at a scale greater than an individual property, or farming enterprise level. As highlighted elsewhere in this submission, HortNZ strongly supports such collective action, as it allows the focus of members of the collective to be on addressing the most pressing environmental challenges within their area, which arguably will result in positive environmental improvements more quickly. Such schemes however do not necessarily need to be at the scale of a catchment – what is more important is that the members of the scheme have some relationship with each other, and are willing to work co-operatively with each other to address the water quality issues

that challenge their area. Groups that already exist, or that naturally form must be enabled to become collectives – irrespective of the extent of the geographical area that they cover. It is the collective nature of the action that should be the focus of this policy. HortNZ consequently requests that the collectives are referred to simply as ‘collectives’.

It is also noted that it is not explicitly clear whose responsibility it is to complete a farm plan – particularly for land that is leased, which can sometimes be for very short periods of time (ie. one or two years) if a vegetable crop is grown on it, and can only be replanted there a couple of times before it needs to be rotated with an alternative crop for soil health and disease control reasons. It is important that expectations in relation to this are made clear.

Also – with regards to Section 2.3 that relates to the requirement for nutrient management plans to be completed where nitrogen concentrations (as detailed in Schedule 26) are not being met, greater clarity around the scale at which Schedule 26 needs to be provided. Mapping the freshwater quality management units may in itself clarify the situation, because if for example the lowland tributaries were actually split into smaller units, and an assessment of whether or not the DIN objective/target in each smaller unit was provided, then the numbers of landowners that needed to have nutrient management plans completed would be smaller, however if the assessment remains at the ‘unit’ level, then the numbers requiring nutrient management plans could be significant, which raises questions about capacity and capability to complete these – particularly for horticultural growers. Currently limited numbers of horticultural growers have Overseer nutrient budgets therefore a large number would need to start the process of having a budget prepared from the beginning. The challenge that this would create for the nutrient budgeting sector from a capacity perspective, and the impact it could have on timing should not be underestimated, however it could potentially be addressed by refining the geographical scale at which the requirement applied. In any event, HortNZ is strongly of the view that it needs to be clarified.

### **Schedule 31 – Flow, levels and allocation limits**

HortNZ opposes the proposed increase to minimum flow on the Tutaekuri River, as this is not based on requirements of aquatic ecosystems, which is what the minimum flows for all other rivers within the TANK catchments are. There are a large number of horticultural growers within the Tutaekuri Catchment, and a significant amount of development/redevelopment has occurred within the catchment in the last couple of years, therefore patterns of water use are likely to change, and the proposed increase could impact on the ability of growers to take water.

HortNZ also opposes any potential change to the location of the monitoring site for the Ngaruroro River (as denoted by ‘Note 2’ to the table). The current monitoring site has a significant historical record with flow statistics growers have built businesses around. The Council would need to demonstrate that the existing site is inappropriate for sound technical reasons and that the new site will not adversely affect existing reliability if a change in location was to be contemplated.

HortNZ also submits that a clear exemption from the allocation limits specified also needs to be included for water used for frost protection purposes – in a similar manner as has been done for water use that utilised stored water.

In addition, provision should be made to enable growers to continue to use a portion of their reasonable use allocation for root stock survival. We recommend a specific volumetric limit is set for root stock survival water. This sub-set of the allocation would be available below the minimum flow. In evidence we will demonstrate that by requiring most abstractions to cease at minimum flow and restricting irrigation of tree crops to a root stock survival volumetric limit, that the freshwater outcomes that the minimum flows

seek to achieve – for example flow variability to support ecosystem health, will continue to be supported, while also ensuring the survival of high value horticultural crops.

### **Schedule 32 – High Flow allocation**

As clearly articulated throughout this submission, HortNZ is strongly of the view that the ability for growers to access and use water harvested during high flows is critical to the ongoing success of the horticultural sector in Hawke’s Bay. HortNZ therefore supports the inclusion of provisions that allow for the abstraction of water at times of high flow. An inability to access such water would create a significant impediment to the survival of existing horticultural operations that have any development plans – including simply changing variety type to satisfy the changing demands of customers. It would also make the establishment of any new horticultural operations almost impossible –which would create a barrier to land use change that may be positive from a nutrient perspective. With that in mind, HortNZ submits that in addition to the Ngaruroro and Tutaekuri catchments, high flow allocation limits for the Karamu, and also the Ahuriri (if high flow storage within that catchment is feasible), are specified in the plan, to make it clear to growers the volume of water that is potentially available for such purposes. While water harvesting schemes in those catchments could potentially still be applied for under the proposed rule framework, it is not explicitly clear, and given that there is a limit to the volume of high flow water that can be abstracted, it is HortNZ’s view that it would be better to have the volume available explicitly stated in the plan.

HortNZ also submits that the allocation limit for the Ngaruroro high flow take should be revisited. We understand that the TANK collaborative group did not reach a consensus position on the allocation limit and believe that the ability to make more water available through harvesting should be revisited, particularly in light of our understanding that a significant portion of the 8,000L/s currently provided for in the allocation has already been applied for.

### **Schedule 36 – Heretaunga Plains Stream Flow Maintenance and Habitat Enhancement Scheme**

HortNZ supports a collective approach to the management of the stream depletion effects of groundwater takes. However, given the high level of uncertainty about how these schemes will actually come together, it is suggested that the content of Schedule 36 needs to be substantially reduced, so that any issues that may occur as a result of the current level of prescription in the Schedule, on schemes whose shape and function are currently so unclear, are avoided.

While HortNZ acknowledges how successful the augmentation scheme established in the Twyford area has been, it does note that it cannot be expected that the same approach to scheme development, nor uptake will occur elsewhere within the TANK catchments, as the context in every case will differ, therefore it is critically important that the drafting of Schedule 36 provides the flexibility and adaptability that will be required to enable successful schemes to be set up, where feasible.

### **Actual and Reasonable**

The current drafting of the definition for actual and reasonable creates innumerable problems for horticultural growers therefore HortNZ seeks that subsection b) is deleted in its entirety, and subsection c) is amended by deleting subsection (i), and (ii) – which would effectively mean that the quantity became ‘reasonable’, rather than ‘actual and reasonable’ – largely because there is extraordinary difficulty for many growers in demonstrating actual use because of a lack of robust water meter data – either because water meters were not installed until recently<sup>7</sup>, or water meter records that do exist are not entirely accurate as in many instances the finetuning of the meters to ensure accurate readings took some time. Given that the end of subsection (b) states that ‘if insufficient or no accurate data is available, either clause a) or c) will apply’ the relief sought by HortNZ is effectively anticipated by the current drafting of the definition. HortNZ also submits that the limitation to the irrigated area is unnecessary, and introduces an additional restriction that effectively penalises water permit holders that are using their water permits very efficiently. HortNZ accepts that the quantity of water allocated should not increase, however if a grower wishes to irrigate that quantity of water across a larger area, then they should be encouraged and enabled to do so, and the current drafting of the definition does not enable that. Fixing the irrigated area to what has occurred historically makes no sense from an environmental effects perspective, and could be perceived as creating a disincentive for water permit holders to achieve higher levels of water use efficiency. It is critical to the horticultural sector that water is available to irrigate land that is not currently irrigated because without it the establishment of new horticultural crops will be almost impossible, which as previously highlighted, would be detrimental to the ongoing sustainability of the horticultural sector across the TANK catchments. If the irrigation of additional land can be achieved within the volume of water that is specified on permits for renewal, or calculated using Irricalc, then HortNZ is strongly of the view that should be encouraged, and arguably would be consistent with the many provisions of this plan change that seek to encourage increased water efficiency.

HortNZ believes that at the time the plan is reviewed (within 10 years of this plan change becoming operative) it would be appropriate to reinstate the consideration of water meter data as one of the means of determining actual and reasonable use, as at that time, reliable water meter data would be available for all water takes. This approach would also be more in-keeping with the step-wise approach that has been adopted in this draft plan change in regards to nutrient loss, and this is an approach that HortNZ supports, and believes will more effectively enable changes in practices and behaviour of all water users.

### **Baseline Commercial Vegetable Growing Area – New Definition**

To support HortNZ’s proposed changes to TANK6 and definition for land use change, a definition for ‘baseline commercial vegetable growing area’ is required, and should be as follows: Means the maximum total aggregated area of land used for a commercial vegetable growing operation, including the full sequence of crops and pasture used as part of a rotation, in any 12 month consecutive period within the period of 1 May 2015 to 1 May 2020 and under the control (owned or leased) of a single farm. Inclusion of this definition is required to support HortNZ’s proposed definition for land use change, that does not include the change in location of existing areas of arable and vegetable crop rotations. Flexibility in the area required for arable and vegetable rotations is necessary to support crop health and soil health, both of which are dependent on the ability to rotate crops across different properties over time.

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<sup>7</sup> The water meter guidelines did not require takes of 5-10l/s to have water meters install on them until November 2016.

### **Commercial Vegetable Growing Rotation – New Definition**

To support HortNZ's proposed changes to TANK6 a definition for 'commercial vegetable growing rotation' is required, and should be as follows: Means a sub-set of horticultural land use that involves crop rotation where the predominate purpose is growing, for the purpose of commercial gain, vegetable crops for human consumption, on one or more parcels of land held in single or multiple ownership (whether or not held in common ownership) that constitutes a single operating unit but excludes vegetable crops grown under cover, and includes the full sequence of crops and pasture used as part of that rotation. It is a productive land use. The definition is required to support HortNZ's proposed amendment to TANK6, that would enable expansion of an existing Commercial Vegetable Growing Rotations area by 10%, to provide for domestic food supply.

### **Farm– New Definition**

HortNZ submits that the terms property and farming enterprise are replaced throughout the plan with the term 'farm' which is defined as 'a landholding whose activities include agriculture'. This definition is aligned with the NESFW 2020 and therefore provides much greater clarity about who is responsible for FEPs and consenting requirements.

### **Land Holding – New Definition**

HortNZ submits that a definition of 'land holding should be added, and should mean one or more parcels of land (whether or not they are contiguous) that are managed as a single operation. This definition would align with the NESFW 2020 and would therefore provide much greater clarity about who is responsible for FEP and consenting requirements.

### **Nitrogen Losses for Production Land – New Definition**

HortNZ submits that a definition of 'nitrogen losses for production land' should be added, and defined as 'The modelled estimate of average annual nitrogen load, calculated for each farm. For a commercial vegetable growing rotation, the nitrogen loss estimate must include the full sequence of crops and pasture used as part of that rotation'. This definition improves clarity.

### **Production Land – New definition**

HortNZ submits that a definition of 'production land' needs to be added, and that it should mean the following: A farm where all or part of the farm is (a) arable land use; or (b) horticultural land use; or (c) pastoral land use; or (d) other agricultural land use prescribed in regulations made under section 217M(1)(b); or (e) any combination of the above'. This definition is consistent with the definition of 'Farm' within the RMA 2020 amendment, however, is a better description of productive land, with 'farm' more usefully defined as it is in the NESFW 2020. HortNZ notes that several consequential amendments will need to be made to add further clarity in relation to this definition, including the addition of definitions of 'arable land use', 'horticultural land use' and 'pastoral land use', as set out in the 2020 RMA Amendment.

### **Production Land Use Change – New definition**

HortNZ submits that a definition of Production Land use change needs to be added to the plan, and should be as follows: 'Any change from or to, arable, horticulture, pastoral or other agricultural land use, that is greater than 10ha, compared with the area of the farming activity at May 2020. Land use change does not include a change in the location of crop rotation where the baseline growing area is not exceeded

within a Freshwater Quality Management Unit'. This definition clarifies the extent to which the land use rules within the plan apply, as well as Schedule 29.

### **TANK Industry Programme or TANK Catchment Collective**

As currently drafted, the definition doesn't really define what Industry Programmes or Catchment Collectives really are. In line with HortNZ's comments in relation to Schedule 30, we submit that the definitions should be separated, and the definitions revisited in light of refined drafting of the schedule.

## Summary of relief sought

HortNZ seek the amendments set out in the table below, or amendments to like effect. We also note that there are likely to be consequential amendments arising from these that may affect the whole plan. Additions are indicated by underline, and deletions by strikethrough text.

Provision	Support/oppose	Decision sought	Reason
Obj TANK 4	Support with amendments	Amend the maps in Schedule 26 to show the location of monitoring sites.	The objective requires monitoring, and it would be clearer if the monitoring sites were identified in Schedule 26.
Obj TANK 7	Support with amendment	Amend to say “Land use is carried out in a manner reduces contaminant loss <u>in accordance with good, or where necessary best management practice</u> , including soil loss...”	Industry specific good management practices set out how contaminant loss should be managed, which provides clarity for plan users about how reductions can be achieved, but also recognises that some landowners may not need to make changes to their practices, as they are already operating at good management practice.
Obj TANK 8	Support with amendment	Amend to say ‘is improved by <del>appropriate</del> —management of riparian margins <del>that to</del> : a) <u>reduces</u> effects of contaminant loss from land use activities etc.....’	Clarifies intent of objective
Obj TANK 15	Oppose (g)	Delete specific areas specified in (g) to be restored and created, unless evidence can be provided that shows where these areas are, and that no adverse off-site effects will result from the work.	HortNZ is concerned that the goals of 200ha of restoration and 100ha of creation may not be achievable, taking into account the need for any such work to not have any adverse effects on neighbouring landowners.
Obj TANK 17	Support with amendment	Amend to clearly state that sub-sections a)-d) are <u>not</u> listed in any order of priority.	Clarifies objective.
Obj TANK 18	Support with amendment	Amend to state that sub-sections <u>are</u> in order of priority, and re-order to list as follows:  a) Water harvesting and storage; b) Flexible water allocation and management regimes; c) <del>Aquifer recharge</del> and flow enhancement; d) Water conservation, water use efficiency, and innovations in technology and management; e) Water reticulation.	Clarifies objective by explicitly identifying where opportunities genuinely lie to secure the current and foreseeable water needs of future generations.
Policy 1	Support with amendments	Amend f) by adding ‘ <u>and irrigation purposes</u> ’.	Recognises that maintenance of water quality is important for irrigation purposes also.

<b>Policy 2</b>	Support with amendments	Amend by adding ' <u>landowner collectives</u> ' to the start of the policy, and add to the end of a)i) ' <u>and biosecurity requirements of adjacent land use</u> '	Specifically recognises that riparian planting projects need to take into account the biosecurity requirements of adjacent land use
<b>Policy 4</b>	Support with amendment	Amend by adding definition of 'lower Ngaruroro' and planning map outlining extent of area	Clarifies area to which policy applies.
<b>Policy 6</b>	Support with amendment	Amend by adding as subsection (b) ' <u>requiring Registered Drinking Water Suppliers to quantify the vulnerability of the registered drinking water supply to contamination, and then undertake an assessment of options to relocate existing drinking water supplies to less vulnerable locations</u> '.	Ensures that registered drinking water supplies are as appropriately sited as possible – taking into account need to avoid limiting productive land uses on the highly productive soils of the Heretaunga Plains.
<b>Policy 7</b>	Support with amendment	Amend by adding subsection e) as follows: <u>require applications to include an assessment of the vulnerability of the location to contaminants from existing activities, and sites that are vulnerable are avoided where possible.</u>	Ensures that registered drinking water supplies are as appropriately sited as possible – taking into account need to avoid limiting productive land uses on the highly productive soils of the Heretaunga Plains.
<b>Policy 8</b>	Support with amendment	Amend by adding an additional subsection to b) <u>as follows: nature of existing land and water use within Source Protection Zone, existing investment in those activities, and the specific locational needs of those activities.</u>	Ensures that registered drinking water supplies are as appropriately sited as possible – taking into account need to avoid limiting productive land uses on the highly productive soils of the Heretaunga Plains.
<b>Policy 13</b>	Support		HortNZ encourages HBRC to provide information about appropriate riparian planting asap, and to not wait until the provisions of this plan are finalised.
<b>Policy 16</b>	Support with amendment	Amend by adding a definition of 'flushing flow' to the plan	Clarifies impact of policy.
<b>Policy 17</b>	Support with amendments	Amend as follows: 'The Council will achieve or maintain the freshwater targets or freshwater objectives in Schedule 26 <u>by working with</u> landowners,	Clarifies and refines the policy.

		<p><u>landowner collectives, industry groups, and other stakeholders and will implement the following measures;</u></p> <p>a) <u>establishing programmes and processes through Farm Environment Plans, <del>Catchment Landowner Collectives</del> and Industry Programmes to ensure land managers;</u></p> <p>(i) <u>adopt <del>industry</del> good management practice;</u></p> <p>(ii) <u>identify critical source areas of contaminants at <del>all relevant scales</del>;</u></p> <p>(iii) <u>adopt effective measures to mitigate or reduce contaminant loss where this is necessary to <del>achieve good management practice</del>;</u></p> <p>(iv) <u>prepare nutrient management plans in catchment not meeting targets for dissolved nitrogen;</u></p> <p>And a definition of 'critical source area' is added to the glossary.</p>	
<b>Policy 18</b>	Support with amendments	<p>Amend as follows: 'The Council will achieve or maintain the freshwater targets or freshwater objectives in Schedule 26 by...</p> <p>c) <u>regulating land use change to manage contaminant loss across a range of contaminants;</u></p> <p>e) <u>working with industry groups, <del>collectives</del>, landowners and other stakeholders to undertake research and investigation into;</u></p> <p>(i) <u>nutrient pathways, concentrations and loads in rivers and coastal receiving environments;</u></p> <p>(ii) <u>nutrient uptake and loss pathways at a property scale;</u></p> <p>(iii) <u>measures to reduce contaminant losses at a property as well as catchment scale including those delivered through industry programmes and <del>landowner collectives</del>.</u></p>	The community values and freshwater outcomes sought relate to a range of target attributes and contaminants. Regulation of land use should focus on achieving priority outcomes, rather than focusing on one indicator.
<b>Policy 19</b>	Support with amendments	<p>Amend as follows: 'In catchments that do not meet objectives for dissolved <del>nutrients</del> <u>nitrogen</u> specified in Schedule 26, the Council will ensure landowners, <del>landowner collectives</del> and industry groups have nutrient</p>	Consistent with Policy 17, however then may create inconsistency with Schedule 28 which would need to be addressed.

		management plans according to the priority order in Schedule 28.'	
<b>Policy 21</b>	Support with amendments	<p>Amend as follows: 'The Council will remedy or mitigate the potential impact of <del>diffuse discharge of nitrogen on freshwater quality objectives by regulating land and water</del> use changes that modelling indicates are likely to result in increased <u>contaminant loss</u> (modelled on an <u>average annual, whole of farm or collective basis</u>) and in making decisions on resource consent applications, the Council will take into account: ...</p> <p>a) <u>contaminant losses modelled to result from the land use change, in relation to whether freshwater quality objectives or targets are being met in the catchment where the activity is to be undertaken;</u>  <del>and will;</del></p> <p>d) <del>avoid land use change that will result in increased nitrogen loss that contributes to water quality objectives and targets in Schedule 26 for dissolved nitrogen not being met.</del></p> <p>e) <u>support crop rotation across highly productive land to maintain the soil health of highly productive land</u></p> <p>f) <u>Recognise the importance of the TANK catchments for supplying vegetables for domestic food supply</u></p> <p>g) <u>Support the transition to a low emissions economy by enabling land use change that reduces greenhouse gas emissions, improves sequestration and promotes climate change adaptation,</u></p>	<p>In our view the land use change policy should focus on managing all contaminants.</p> <p>In our view the land use change policy should also signal the positive effects that land use change can bring. Land use change is important for domestic food supply, climate change mitigation and climate change adaptation and enabling and promoting it requires some flexibility so increases in some contaminants can occur at the farm scale, provided at the FMU or collective scale the overall water quality outcomes across a range of values are achieved.</p>
<b>Policy 23</b>	Support with amendments	<p>Amend as follows: 'The Council will support the establishment and operation of <del>Industry Programmes and Catchment landowner</del> Collectives and:</p> <p>a) <del>ensure any relevant information or expertise for making sustainable land management decisions is available to land managers;</del></p>	<p>More accurately reflects the functional capability of industry programmes, and focuses policy at collective scale, rather than unnecessarily focusing at catchment scale.</p>

		<p>b) support development and use of <del>catchment scale</del> models that assist in identification and management of critical source areas;</p> <p>c) support <del>catchment</del> <u>collective</u> and farm scale decision making to meet freshwater objectives and encourage local solutions and innovative and flexible responses to water quality issues;...</p>	
<p><b>Policy 24</b></p>	<p>Support with amendments</p>	<p>Amend as follows: 'The Council will continue to work with landowners, industry groups and other stakeholders to manage land and water use activities so that they meet objectives for freshwater/aquatic ecosystems by:</p> <p>a) further supporting the development of Industry Programmes that contribute to meeting applicable freshwater objectives and that;</p> <p>(i) <del>identify practices that contribute to meeting applicable freshwater objectives;</del></p> <p>(ii) <del>specify timeframes for completion or adoption of measures to mitigate contaminant losses;</del></p> <p>(iii) ensure individual performance under an Industry Programme is monitored;</p> <p>(iv) provide annual reports to the Council on progressive implementation of measures <u>implemented by members identified in Industry Programmes established under Schedule 30 and progress towards meeting applicable objectives for water quality;</u></p> <p>(v) promote adoption of good <u>industry management</u> practice;</p> <p>(vi) ensure that Industry Programmes are consistent with the requirements of Schedule 30;</p> <p>b) supporting landowners to establish <u>Catchment landowner</u> Collectives to develop and implement environmental management plans that contribute to meeting applicable freshwater objectives and that;</p>	<p>More accurately reflects the functional capability of industry programmes.</p>

		<p>(i) <del>identify and adopt measures at a property scale and collectively with other land managers that reduce contaminant losses or remedy or</del> mitigate the effects of land use on freshwater objectives;</p> <p>(ii) specify timeframes for completion or adoption of measures to mitigate contaminant losses;</p> <p>(iii) ensure individual performance under a catchment collective is monitored;</p> <p>(iv) provide annual reports to the Council on progressive implementation of measures <del>identified in landowner collectives established under Schedule 30 and progress towards meeting applicable objectives for water quality;</del></p> <p>(v) promote adoption of good <del>agricultural</del> <u>management</u> practice;</p> <p>(vi) ensure programmes prepared by a collective are consistent with the requirements of Schedule 30;</p> <p>c) Approving any Landowner Collective or Industry Programme developed under Schedule 30;</p> <p>d) Auditing Landowner Collective or Industry Programmes <u>where appropriate</u>'.</p>	
<p><b>Policy 26</b></p>	<p>Support with amendment</p>	<p>Amend as follows': <del>Where individuals are members of a Catchment Collective or Industry Programme but do not undertake their activity in accordance with the approved plan prepared in accordance with Schedule 30, or do not follow the agreed terms of membership the Council will;</del></p> <p>a) <del>provide a conflict resolution service;</del></p> <p>b) <del>where an</del> <u>If a property/enterprise owner is not a member of a landowner collective or industry programme individual is no longer, or is deemed through conflict resolution processes not to be, a member</u> the Council will;</p> <p>(i) require the development of a farm plan for that property within 6 months or;</p>	<p>Simplifies policy to make expectations clearer.</p>

		(ii) require an application for a land use consent to be made; c) take appropriate enforcement action.	
Policy 27	Oppose	Move table to Schedule 30, and then delete remainder of policy in its entirety	Outcome sought would not be achieved by mechanism identified.
Policy 32	Support with amendment	Amend as follows: 'The Council will support the development of an Ahuriri Estuary Integrated Catchment Management Plan by <u>a representative group of stakeholders, that includes (but is not limited to) representatives from the primary sector;</u>	Highlights importance of any plan being put together by a group that includes representatives from all relevant stakeholder groups.
Policy 34	Support with amendments	Amend as follows: Council will meet regularly with <del>representatives from a TANK stakeholder groups</del> <u>that includes representatives from all relevant sectors of the community, and will discuss (as appropriate) matters relating to:</u> a) <del>review and report on TANK implementation of the TANK plan;</del> b) <u>issues arising within the TANK Catchments that could be addressed by future plan changes;</u> c) <u>progress towards freshwater objectives/targets;</u> d) <u>possible options for consideration at time of plan review.</u> <del>and develop measures to enable their resolution.</del>	Ongoing dialogue between the council and the community regarding the implementation of the plan change, and possible future approaches to catchment planning is important, and should be required by provisions of the plan, to ensure it occurs.
Policy 36	Support with amendments	Amend as follows: 'The Council recognises the actual and potential adverse effects of groundwater abstraction in the Heretaunga Plains Water Management Unit on... and will adopt a staged approach to groundwater management that includes; f) <del>avoiding further adverse effects by not allowing restricting new water use</del> g) <u>encouraging water use efficiency reducing existing levels of water use;</u> h) <u>gathering information about actual water use and its effects on stream depletion;</u>	Ensures consistency with other sections of the plan.

		<p>h) <u>where practicable</u> mitigating the adverse effects of groundwater abstraction on flows in connected water bodies;</p> <p>i) <del>gathering information about actual water use and its effects on stream depletion;</del></p> <p>j) monitoring the effectiveness of stream flow maintenance and habitat enhancement schemes;</p> <p>k) including plan review directions to assess effectiveness of these measures.</p>	
<p><b>Policy 37</b></p>	<p>Support with amendments</p>	<p>Amend as follows: In managing the allocation and use of groundwater in the Heretaunga Plains Water Management Unit, the Council will;</p> <p>a) <u>adopt an interim allocation limit based on reasonable use of 90 million cubic meters per year based on the actual and reasonable water use prior to 2017;</u></p> <p>b) <del>avoid restrict the</del> re-allocation of any water that might become available within the interim groundwater allocation limit or within the limit of any connected water body <u>to primary production purposes, or for use in stream flow maintenance and enhancement schemes.</u> <del>until there has been a review of the relevant allocation limits within this plan;</del></p> <p>c) manage the Heretaunga Plains Water Management Unit as an over-allocated management unit and prevent any new allocations of groundwater;</p> <p>d) when considering applications in respect of existing consents due for expiry, or when reviewing consents, to;</p> <p>(i) allocate groundwater the basis of the maximum quantity that is able to be abstracted during each year or irrigation season expressed in cubic meters per year;</p> <p>(ii) apply an assessment of <del>actual and reasonable use</del> <u>(using Irricalc)</u> <del>that reflects land use and water use authorised in the ten</del></p>	<p>Avoids the policy being unnecessarily restrictive, given that our knowledge about what a sustainable groundwater limit might be is still incomplete.</p>

		years up to August 2017 (except as provided by Policy 50); e) mitigate stream depletion effects on lowland streams by providing for stream flow maintenance and habitat enhancement schemes.	
<b>Policy 38</b>	Support with amendments	Amend as follows: 'The Council will <del>restrict the re-allocation of water to holders of permits to take and use water in the Heretaunga Water Management Unit issued before 2 May 2020</del> and will review permits or allocate water according to the plan policies and rules either: a) upon expiry of the consent; or b) in accordance with a review of all applicable permits within ten years of; whichever is the sooner.'	Avoids unnecessary restriction on who water can be 're-allocated' to.
<b>Policy 39</b>	Support with amendments	Amend as follows: 'When assessing applications to take groundwater in the Heretaunga Plains Water Management Unit the Council will: a) either; (i) require abstraction to cease when an applicable stream flow maintenance scheme trigger is reached; or (ii) enable consent applicants to develop or contribute to stream flow maintenance and habitat enhancement schemes that; 1. contribute flow to lowland rivers where groundwater abstraction is depleting stream flows; and 2. improve oxygen levels and reduce water temperatures; b) assess the relative contribution to stream depletion from groundwater takes and require stream depletion to be off-set equitably by consent holders while providing for exceptions for the use of water for essential human health; and <del>c) enable permit holders to progressively and collectively through Water User Collectives develop and implement flow maintenance and habitat enhancement schemes as water permits are replaced or reviewed,</del>	Given the uncertainty about how and when stream flow maintenance and habitat enhancement schemes, it is considered prudent to delete some of the unnecessary detail from this policy.

		<del>in the order consistent with water permit expiry dates.</del>	
Policy 41	Oppose	Amend as follows: The Council will <u>further consider the option of remedying</u> the stream depletion effects of groundwater takes in the Heretaunga Plains Water Management Unit on the Ngaruroro River, in consultation with mana whenua, land and water users and the wider community through: a) further investigating the environmental, technical, cultural, <u>social</u> and economic feasibility of a water storage and release scheme to off-set the cumulative stream depletion effect of groundwater takes;...	Does not unnecessarily commit the TANK community to a scheme that may not be, on balance, in the best interests of the community.
Policy 47	Support with amendments	Amend as follows: 'When considering applications for resource consent, the Council will ensure water is allocated and used efficiently by: a) ensuring that the technical means of <del>using</del> <u>use of water</u> are physically efficient through; (i) allocation of water for irrigation end-uses based on soil, climate and crop needs; (ii) <del>requiring the</del> adoption of good <u>management</u> practice water use technology and processes that minimise the amount of water <del>wasted</del> <u>lost from the soil profile</u> ; and (iii) the use of water meters; A definition of 'application efficiency' is added that states: <u>"80% of applied water is retained within the crop root zone, after an irrigation event and/or for the irrigation season."</u> A definition of 'distribution uniformity' is added that states: <u>"Distribution uniformity is a measure of how evenly water is applied to the ground. It is calculated using the low quarter distribution uniformity coefficient DU<sub>lq</sub>"</u>	Better aligns the policy with terminology as used within the irrigation industry.
Policy 48	Support with amendments	Amend as follows: 'When considering any application to change the water use specified by a water permit, or to transfer a	Protects water for primary production uses.

		<p>point of take to another point of take, to consider:...</p> <p>g) declining applications for a change of use from frost protection to any other end use <u>except primary production</u>;</p>	
Policy 49	Support with amendments	<p>Amend as follows: 'When making decisions about applications for resource consent to take and use water, the Council will set common expiry dates for water permits to take water in each water management zone, that enables consistent and efficient management of the resource and will set durations that provide a periodic opportunity to review effects of the cumulative water use and to take into account potential effects of changes in:</p> <p>j) <u>except where an application is to take and use water storage projects, consent durations of greater than 15 years will be considered and may be granted if a longer consent term is justified on the basis of the quantum of investment required to construct the scheme.</u></p>	Provides necessary flexibility if large scale water storage is found to be a viable option within the catchment.
Policy 51	Support		Recognises the importance of irrigating horticultural tree crops during extended dry periods.
Policy 52	Support with amendments	<p>Amend as follows: The Council will phase out over-allocation by;</p> <p>a) preventing any new allocation of water (not including any reallocation in respect of permits issued before 2 May 2020, <u>and high flow water provided for by this plan</u>);</p> <p>b) for applications in respect of existing consents due for expiry or when reviewing consents, to;</p> <p>(i) allocate water according to <del>demonstrated</del> <del>actual</del> and reasonable need (except as provided for by Policy 50)</p> <p>(ii) impose conditions that require <del>efficiency gains to be made,</del> including through altering the</p>	Ensures that new water from high flow allocations can be accessed, and makes policy more practically appropriate in its application

		<p><del>volume, rate or timing of the take and requesting</del> information to verify efficiency of water use relative to industry good <u>management practice standards</u>;</p> <p>c) provide for, within the duration of the consent, meeting water efficiency standards where hardship can be demonstrated;</p> <p>d) reducing the amount of water permitted to be taken without consent, including those provided for by Section 14 (3)(b) of the RMA, except for authorised uses existing before 2 May 2020;</p> <p>e) encouraging voluntary reductions, site to site transfers (subject to clause (f)) or promoting water augmentation/harvesting;</p> <p>f) prevent site to site transfers of allocated but unused water that does not meet the definition of <del>actual and</del> reasonable use; ...</p>	
<p><b>Policy 53</b></p>	<p>Support with amendments</p>	<p>Amend as follows: 'When considering applications to take water for frost protection, the Council will avoid, remedy or mitigate actual and potential effects of the take on its own or in combination with other water takes;</p> <p>a) from groundwater in the Heretaunga Plains Water Management Unit on;</p> <p>(i) neighbouring bores and existing water users;</p> <p>(ii) <del>connected surface water bodies</del>;</p> <p>(iii) <del>water quality as a result of any associated application of the water onto the ground where it might enter water</del>;</p> <p>b) from surface water on;</p> <p>(i) instantaneous flow in the surface water body;</p> <p>(ii) fish spawning and existing water users;</p> <p>(iii) applicable minimum flows during November to April;</p> <p>(iv) <del>water quality as a result of any associated application of the water onto the ground where it might enter water</del>;</p> <p>By;</p>	<p>More appropriately reflects the limited scope of any effects that do occur as a result of frost protection takes.</p>

		<p><del>e) taking into account any stream depletion effects of groundwater takes;</del></p> <p>d) imposing limits in relation to minimum flows or groundwater levels;</p> <p>e) requiring water metering, monitoring and reporting use of water for frost protection.</p>	
Policy 54	Support with amendments	<p>Amend as follows: 'When assessing applications to dam water and to take water from the dam impoundment, the Council will avoid, remedy or mitigate adverse effects of;</p> <p><del>a) potential changes to water quality arising from subsequent changes to land use activities that may occur as a result of water being allocated for take and use from the dam and whether relevant freshwater quality objectives can be met;</del></p> <p>b) ...</p> <p><del>c) whether there are practicable alternatives; and, except as prohibited by Policy 58, will limit the amount of flow alteration so that the damming of surface water either on its own or in combination with other dams or water storage in a catchment does not cumulatively adversely affect the frequency of flows above three times the median flow by more than a minor amount and provided that any dam in combination with other dams or high flow takes shall not cause changes to the river flow regime that are inconsistent with specified flow triggers.</del></p>	More appropriately reflects the water take focus of the policy.
Policy 55	Support with amendments	<p>Amend as follows: 'When assessing applications to take water for off-stream storage or to take water from the impoundment the Council will avoid remedy or mitigate adverse effects of;</p> <p><del>a) potential changes to water quality arising from subsequent changes to land use activities as a result of water being allocated for take and use from the impoundment and whether relevant freshwater quality objectives can be met;</del></p>	More appropriately reflects the water take focus of the policy, and the fact it relates to off-stream dams, which have less effects than in-stream dams.

		<p>b) the magnitude, frequency, duration and timing of water takes either by itself or cumulatively with other storage structures or dams, on;</p> <p>(i) the uses and values for any water body identified in the objectives;</p> <p><del>(ii) water levels and flows in connected water bodies, including lakes and wetlands;</del></p> <p><del>(iii) water quality, including effects on temperature and management of periphyton in connected water bodies;</del></p> <p><del>(iv) river ecology and aquatic ecosystems, including passage of fish and eels, indigenous species habitat and riparian habitat, including in relation to the storage impoundment;</del></p> <p><del>(v) groundwater recharge;</del></p> <p>(vi) downstream land, property and infrastructure at risk from failure of the proposed storage structure;</p> <p>(vii) other water users; and will limit the amount of flow alteration so that the taking of surface water does not cumulatively adversely affect the frequency of flows above three times the median flow by more than a minor amount and provided that;</p> <p>(viii) the high flow take ceases when the river is at or below the median flow;</p> <p>(ix) such high flow takes do not cumulatively exceed the specified allocation limits;</p> <p>(x) any takes to storage existing as at 2 May 2020 will continue to be provided for within new allocation limits and subject to existing flow triggers.</p>	
<p><b>Policy 59</b></p>	<p>Support with amendments</p>	<p>Amend as follows: 'The Council will allocate 20% of the total water available at times of high flow in the Ngaruroro or Tūtaekurī River catchments for abstraction, storage and use for the following activities; ...</p> <p><del>e) the use of water for any activity, provided that;</del></p> <p><del>(i) it includes contribution to a fund managed by the Council in</del></p>	<p>Removes from regional policy financial arrangements that are a private matter.</p>

		<p><del>consultation with mana whenua; and</del></p> <p>(ii) <del>the fund will be used to provide for development of Māori wellbeing;</del></p> <p>(iii) <del>the contribution to the fund is proportional to the amount of reserved water being taken and any commercial returns resulting from the application...</del></p>	
Policy 60	Support with amendments	Amend as follows: 'When making decisions about resource consent applications to take and store high flow water <u>in accordance with Policy 59</u> , the Council will take into account the following matters:...'.	Clarifies relevance of policy
TANK 1	Support with amendments	Amend by replacing (throughout plan) terms farm property/farming enterprises with term 'farm.	Improves clarity of plan and aligns definition with NESFW 2020.
TANK 3	Support with amendments	Add definition of 'active formed channel' to plan	Improves clarity of plan
TANK 5	Support with amendments	<p>Amend as follows: 'a) Any change to the production land use activity commencing after 2 May 2020 is over more than 10% of the <del>property or farming enterprise</del> <u>total area of land managed by the landowner collective</u>'.</p> <p>Matter for control (1) is amended as follows: Modelling using Overseer, or alternative model approved by Council to demonstrate the change in land use activity will be consistent with avoiding land use change that will result in increased <u>annual average</u> nitrogen loss that contributes to water quality objectives and targets in Schedule 26 for dissolved nitrogen not being met.</p> <p>Additional Matter for control is added: <u>(8) The crop rotation and spatial extent of the rotation with the FMU.</u></p> <p>A definition of 'production land use change' is also added.</p>	<p>Genuinely incentivises landowners to join collectives, and also improves clarity of the plan. \</p> <p>Vegetable rotations need to be consented as a crop rotation area that can move across the FMU</p> <p>Assessments must be for the average annual discharge load over the full duration and including the full sequence of crops and pasture. For commercial vegetable rotations we have proposed a 5 year rotation for the baseline assessment. For land use change, the assessment could be over a longer rotation, if that is what the activity requires.</p>
TANK 6	Support with amendments	Amend Condition b) by adding the following to the end of the	Where farmers and or growers are operating

		<p>condition: <u>'per farm or cumulatively for collectives.</u></p> <p>Add a new condition:</p> <p>d) <u>or an increase in area of the existing commercial vegetables growing area by up to 10%, assessed at either the farm or collective scale.</u></p> <p>Additional Matter for control is added: <u>(10) The crop rotation and spatial extent of the rotation with the FMU.</u></p>	<p>within collectives, we propose they should be able to combine the load allowance per farm to provide greater flexibility for collectives.</p> <p>Enables a small expansion of vegetable rotations aligned with population growth that is not subject to the nitrogen loss criteria within Schedule 29, which is important to help secure the domestic vegetable supply.</p>
<b>TANK6A</b>	Support	<p>Insert new rule that provides a clear consenting pathway for activities that don't comply with TANK6. The activity status for this should be discretionary.</p>	<p>A discretionary pathway is required to provide for land use change that doesn't comply with the other land use rules. land use change that would result in an increase in nitrate that exceed schedule 29, should be assessed as discretionary activity, and could be approved if it was consistent with the overall policy, for example resulted in significant reductions in greenhouse gas emissions and <i>E. coli</i>, and did not prevent outcomes associated with nitrate discharges being achieved.</p>
<b>TANK 7 &amp; 8</b>	Support with amendment	<p>Amend to include a specific exemption for the ongoing abstraction of up to 20m<sup>3</sup> if water is abstracted for the purpose of assisting the survival of permanent horticultural crops.</p>	<p>Critical to ensure survival of permanent horticultural crops.</p>
<b>TANK 9 &amp; 10</b>	Support with amendments	<p>All references to 'actual and reasonable' are amended to just be to 'reasonable'.</p> <p>An additional matter of discretion is added as follows: <u>'The effects of any take and use for root stock survival on flows in connected surface water bodies.</u></p>	<p>Consistency with rest of plan</p>

<b>TANK 12</b>	Oppose	Amend status to be 'non-complying'	Provides an opportunity for applications to be considered on a case by case basis, and decided on their merits.
<b>TANK 18</b>	Oppose	Amend status to be 'restricted discretionary'	Provides greater clarity about matters to be considered in processing applications, and also incentives development of schemes more effectively.
<b>RRMP 7</b>	Support with amendments	Add exclusions to rule that allow the clearance of indigenous vegetation where it is required for biosecurity purposes, and also allow cultivation within setbacks where it is intermittently required for soil health and operational needs.	Enables intermittent activities that are critical to growing operations to continue to occur unimpeded.
<b>RRMP 13</b>	Support with amendments	Amend by adding ' <u>at any one time</u> ' to end of (j).	Clarifies rule.
<b>RRMP 32 &amp; 33</b>	Oppose	Amendments to 32 and 22 are deleted	Will enable information to be gathered that can inform decisions about need for any (future) regulation.
<b>RRMP 62a</b>	Support with amendments	Amend by deleting (d)(i) (related to groundwater takes in HPWMU). Delete (f). (h) is amended to refer only to 'reasonable'	Improves clarity of rule.
<b>Schedule 26</b>	Support with amendments	Add the location of the monitoring and information on the existing state.	Improves understanding on whether the target attribute state is seeking to be maintained or improved
<b>Schedule 28</b>	Support with amendments	Amend by deleting ' <del>5. A source Protection Zone</del> '.  Amend catchment names to make clear the relationship of these catchments to other catchments identified in the plan  Amend catchment maps to ensure that contaminant loads discharged from upstream are not double counted, and the land that is captured by the risk categories represents the contribution of catchment to loads at the sub-	Improves coherence and clarity of schedule.

		catchment and whole of catchment scales.	
<b>Schedule 29</b>	Support with amendments	<p>Amend by adding definition of 'production land use change' to plan.</p> <p>State single N loss load applicable to all land uses and locations, however if current approach is maintained, update kiwifruit and vegetable rotation numbers and other crops, in accordance with evidence HortNZ will submit at hearing.</p>	<p>Improves clarity of schedule, and accuracy of triggers specified.</p> <p>Adopting single permitted load would reduce the complexity of the approach and is not warranted from an effects perspective.</p>
<b>Schedule 30</b>	Support with amendments	Amend by redrafting and splitting out requirements for landowner collectives and industry programmes. Whose responsibility it is for completing farm plans is made explicitly clear.	Clarifies requirements relating to farm plans.
<b>Schedule 31</b>	Support with amendments	<p>Amend minimum flow for Tutaekuri River to 2,000/s.</p> <p>Delete Note 2.</p> <p>Add volume with root stock survival volume/allocation that can be abstracted below minimum flow.</p>	<p>Proposed increase is not justified from an environmental effects perspective, nor is change in location of monitoring point</p> <p>Addition of root stock survival allocation will enable protection of valuable permanent horticultural crops during periods of low flows.</p>
<b>Schedule 32</b>	Support with amendments	Amend by adding allocation frameworks for the Karamu and possibly Ahuriri Catchments (depending on feasibility), and revisit allocation for Ngaruroro.	Improves clarity of schedule.
<b>Schedule 36</b>	Support with amendments	Amend schedule by deleting substantial amount of detail	Ensures schedule will retain flexibility necessary to enable establishment of schemes, in range of contexts
<b>Definition of 'actual and reasonable'</b>	Oppose	<p>Amend by just referring to 'reasonable' - <u>and in relation to applications to take and use water is the lesser of:</u></p> <p>a) <u>the quantity specified on the permit due for renewal or any lesser amount applied for; or</u></p>	Reliance on water data is fraught with innumerable problems, therefore the simplest and fairest approach is, with this first stage of improvements to freshwater management, move all water permit

		<p>b) <u>for irrigation takes, the quantity required to meet the modelled crop water demand for the irrigated area with an efficiency of application of no less than 80% as specified by the IRRICALC water demand model (if it is available for the crop and otherwise an equivalent method) and to a 95% reliability of supply.</u></p>	<p>holders to the lesser volume of either their expiring permit, or Irricalc volume. This is fair and equitable. The current definition can and should be reinstated at the time of plan review in 10 years when everyone will have water meter records that are reliable, and at that time, reductions can and should be made if only small amounts of allocated volumes have been taken (taking into account development phases, and climate).</p>
<p>New definition added for 'baseline commercial vegetable growing area'</p>	<p>Support</p>	<p>Insert definition as follows: <u>'Means the maximum total aggregated area of land used for a commercial vegetable growing operation, including the full sequence of crops and pasture used as part of a rotation, in any 12 month consecutive period within the period of 1 May 2015 to 1 May 2020 and under the control (owned or leased) of a single farm'.</u></p>	<p>Required to support amendments sought to TANK6.</p>
<p>New definition added for 'commercial vegetable growing rotation'</p>	<p>Support</p>	<p>Insert definition as follows: <u>' is a sub-set of horticultural land use, and means a crop rotation where the predominate purpose is growing, for the purpose of commercial gain, vegetable crops for human consumption, on one or more parcels of land held in single or multiple ownership (whether or not held in common ownership) that constitutes a single operating unit but excludes vegetable crops grown under cover, and includes the full sequence of crops and pasture used as part of that rotation.</u></p>	<p>Required to support amendments sought to TANK6.</p>
<p>New definition added for 'farm'</p>	<p>Support</p>	<p>Insert definition as follows: <u>'a landholding whose activities include agriculture'.</u></p>	<p>Consistency with national definition.</p>

Definition of 'Farming enterprise'	Oppose	Delete and replace with term 'farm as defined above.	Consistency with NESFW 2020 .
New definition added for 'land holding'	Support	Insert definition as follows: <u>'one or more parcels of land (whether or not they are contiguous) that are managed as a single operation'.</u>	Consistency with NESFW 2020
New definition added for 'nitrogen losses from production land'	Support	Insert definition as follows: <u>'The modelled estimate of average annual nitrogen load, calculated for each farm. For a commercial vegetable growing rotation, the nitrogen loss estimate must include the full sequence of crops and pasture used as part of that rotation'.</u>	Aids clarity of land use provisions.
New definition added for 'production land'	Support	Insert definition as follows: <u>'A farm where all or part of the farm is (a) arable land use; or (b) horticultural land use; or (c) pastoral land use; or (d) other agricultural land use prescribed in regulations made under section 217M(1)(b); or (e) any combination of the above'.</u>	Clarifies what production land is.
New definition added for 'production land use change'	Support	Insert definition as follows: <u>'Any change from or to, arable, horticulture, pastoral or other agricultural land use, that is greater than 10ha, compared with the area of the farming activity at May 2020. Land use change does not include a change in the location of crop rotation where the baseline growing area is not exceeded within a Freshwater Quality Management Unit'.</u>	Clarifies application of Schedule 29.
Definition of 'TANK Industry Programme or TANK Catchment Collective'	Support with amendments	Amend by separating definitions, and aligning with redrafted Schedule 30.	Clarifies definitions.

## Conclusion

As noted in the introduction to this submission, HortNZ fundamentally supports the general approach of the TANK Plan Change, and believe that it strikes a reasonable balance between seeking to improve the quality and quantity of the TANK catchments freshwater resources through a range of different regulatory requirements, and ensuring that those who rely on water can continue to use it. The plan allows time for practice changes in relation to land use to be made, however as the plan change is currently drafted, a similar stepwise approach to the management of water abstraction is not, in HortNZ's view genuinely enabled.

Achieving water security is critical to the sustainability of the horticultural sector in the TANK catchments, and more broadly in Hawke's Bay. HortNZ has identified in this submission a range of amendments that we consider are necessary to enable that water security to be achieved. Enabling some flexibility in land use change is also fundamental to a productive horticultural industry within the catchments, and amendments are also required to the plan to enable that. HortNZ believes that if the amendments sought are incorporated into the plan change, then the significant regional and national value of fresh water use for production and processing of beverages, food and fibre will be recognised, as is required by the regional policy statement.

HortNZ thanks all those involved in the development of Plan Change 9 to date, noting the significant time that many stakeholders have given to assist the work of the collaborative group, and HortNZ looks forward to ongoing conversation with all relevant parties to produce an operative plan that ensures the sustainability of Hawke's Bay's significant horticultural sector going forward.