

Proposed Waikato Regional Plan Change 1 – Waikato and Waipa River Catchments.

Submission form on publicly notified – Proposed Waikato Regional Plan Change 1 – Waikato and Waipa River Catchments.

SubForm	PC12016	COVER SHEET	
FOR OFFICE USE ONLY			
		Submission Number	
Entered		Initials	
File Ref		Sheet 1 of	

FORM 5 Clause 6 of First Schedule, Resource Management Act 1991

SUBMISSIONS CAN BE	
Mailed to	Chief Executive, 401 Grey Street, Private Bag 3038, Waikato Mail Centre, Hamilton 3240
Delivered to	Waikato Regional Council, 401 Grey Street, Hamilton East, Hamilton
Faxed to	(07) 859 0998 <i>Please Note: if you fax your submission, please post or deliver a copy to one of the above addresses</i>
Emailed to	healthyrivers@waikatoregion.govt.nz <i>Please Note: Submissions received by email must contain full contact details. We also request you send us a signed original by post or courier.</i>
Online at	www.waikatoregion.govt.nz/healthyrivers
We need to receive your submission by 5pm, 8 March 2017.	

YOUR NAME AND CONTACT DETAILS		
Full name Dr Mark Beaven Harris BE, PhD		
Full address 743 Rotowaro Road, RD1, Huntly 3771		
Email mark.harris@gallagher.com	Phone 021 2838891	Fax

ADDRESS FOR SERVICE OF SUBMITTER		
Full name Mark Beaven Harris		
Address for service of person making submission: 743 Rotowaro Road, RD1, Huntly, 3771		
Email mark.harris@gallagher.com	Phone 021 2838891	Fax

TRADE COMPETITION AND ADVERSE EFFECTS <i>(select appropriate)</i>
<input type="checkbox"/> I could / <input checked="" type="checkbox"/> could not gain an advantage in trade competition through this submission.

THE SPECIFIC PROVISIONS OF PROPOSED PLAN CHANGE 1 THAT MY SUBMISSION RELATES TO

*Please state the provision, map or page number e.g. Objective 4 or Rule 3.11.5.1
(continue on separate sheet(s) if necessary.)*

- 1) Requirement for N reference Point for All Farms

Policy 2 c. N reference point for all farms, and subsequently encompassed in Rule 3.11.5.2 item 4 b. , Rule 3.11.5.3 item 2., Rule 3.11.5.4 item 5. , Schedule B – N reference point, page 53 section 5 a) and 5 b)

I SUPPORT OR OPPOSE THE ABOVE PROVISION/S

(select as appropriate and continue on separate sheet(s) if necessary.)

- Support the above provisions
- Support the above provision with amendments
- Oppose the above provisions **and I propose an alternative suggestion that achieves equivalent outcome**

MY SUBMISSION IS THAT

*Tell us the reasons why you support or oppose or wish to have the specific provisions amended.
(Please continue on separate sheet(s) if necessary.)*

1) Context of my submission

My family have dairy farmed in the North Waikato since 1938. My grandfather started with the purchase of 90 acres on Huhu Road Huntly. My father and I have expanded our farm to 530 acres, of which 45 acres are in native and exotic forest. All forest is fenced off, as is the main Te Wha stream flowing through the property. There are no stock water crossings. About 15 years ago we converted a multi-pond effluent system to a large 3 month bunded storage pond that is irrigated onto an effluent block. A feed pad provides standoff area and solids are captured and routinely spread onto paddocks when weather is suitable. Capital Investment in effluent and fencing over 15 years associated with improving the environment is \$100k plus. We also have a 62 hectare dry stock block nearby purchased in 2011. This property was previously a dairy farm and neighbours on 4 sides are dairy farms –one 55 ha, another 100 hectare dairy, a 140 hectare dairy and the other a 280 ha dairy operation. This block was purchased with the intent of forming a larger more economic dairy unit by amalgamation with one of these 4 farms at some point in time, either by myself or one of the neighbours. The 62 hectare block is quality dairy land and is currently stocked heavier (live weight per ha) than our home dairy farm. All my off farm income is invested in the farm.

2) Comments on N Benchmarking and Related Clauses mentioned above

PC1 is focused on reducing sediment, P, N and e coli loadings on the river. The impact of N benchmarks on farmers and my own operation will be to severely limit future growth, to significantly impact the capital values of land farmed and built up through the hard work of multiple generations, and to significantly limit the viability of family farms for future generations. Below are reasons why I believe individual N benchmarking is unfair, unnecessary and counter-productive to driving correct farmer behaviour.

- 1) N benchmarking locks in historical use – penalises those who have done the right thing – is fundamentally unfair
The intent of this requirement in PC1 is that individual farms N usage not be increased. This breaches fundamental property rights in that two farms on the same soils and slopes side by side, one running a low stocking rate system with substantial plantings and the other a more intensive regime will have different limits imposed. This is simply not fair. This will reduce the value of the low stocking rate farm (my own farm is in this category) as future purchasers will not be able to extract the potential from that farm compared to the one next door. This not only represents theft of property rights, it also limits growth in the region and penalises the low input farmer. Farmers operating dry stock operations on dairy suitable land, or dairy farms on land suitable for commercial growing will not be able to change land use type, even if completed using best available practices with a sound environmental plan, and the land is highly productive and environmentally suited to that alternative land use. Similarly, farmers contemplating changing land use to a

less intensive operation are incentivised to remain at current intensity to preserve their historical use-based allocation.

- 2) Benchmarking all farms will be very costly and subject to error. Data sources are very unlikely to be of sufficient reliability for results to be meaningful. We will end up with a massively expanded council and likely supporting organisations to administer. Farmers will pay this cost. Administration costs will balloon while farmers' ability to pay is limited.
- 3) The impact of N on swimability and fishability targets for the Waikato River are far less significant when compared to sediment, P and e coli, but is the factor controlling wealth creation on our farms.

The key variables for swimming are:

- E coli – this is an indicator of other pathogens that cause illness like cryptosporidium and salmonella. The NFWPS bottom line for e coli for swimming is 540. Most experts think this value is very conservative. The current medium at Tuakau bridge is 1700. This is a very big gap.
- Clarity drives people's perception of water suitability for swimming, and is impacted by sediment and algal discoloration of the water, measured by the distance a black disc can be seen through the water. The target for medium clarity is 1.0m (incidentally this is lower than the current WRC target of 1.6m). The current medium at Tuakau bridge is 0.61 m.

For fishlife, e coli is not a relevant factor, also clarity for swimming is more stringent than that required for fishlife. Nitrogen itself does not impact fishlife. Algal blooms are an issue for fish though, as dead decaying algae uses up the oxygen in the water. Toxicity levels from nitrate, according to the NFWP is 6.9. The river is well under this. The Ammonia toxicity limit according to the NFWP is 1.3 versus the current value 0.003.

The above shows that N levels in the river are not directly relevant for swimming or fishlife targets, aside from its influence on algal growth. Attached is a paper by Piet Verburg of Niwa commissioned by the Healthy Rivers TLG, which shows the correlation between algal growth, P and N levels in the Waikato River.



3.4 - 3488629 -
Nutrient limitation of

The report clearly shows P and algal growth are highly positively correlated; both P and algal concentrations are decreasing, while total N levels have increased. Total nitrogen therefore does not impact algal growth in the Waikato river anywhere near the impact that P has.

I have sought out experts on the river who tell me the decrease in P is likely related to improvements in dairy shed effluent management, reduction in P application rates (6% drop per year per ha), and soil erosion control work done in the 70's. Also better management of point sources. Reductions in ammonia levels in river are thought to be a direct result of dairy shed effluent management.

The TLG group themselves also clearly acknowledge the much smaller role of total nitrogen on river quality when compared to P or sediment: below an extract from the Section 32 report page 66 section C2.2.6 Nutrient and Algae relationships in the river:

“Based on the above evidence the TLG concluded that phosphorus is more important than nitrogen in controlling annual medium photoplankton biomass in the Waikato river, but that nitrogen is likely to limit biomass at times and at places during summer and autumn. While efforts to control photoplankton biomass should focus on phosphorus, the evidence suggests than nitrogen should also be controlled.

For use in Plan Change 1 scenario modelling, the above information was used to develop an empirical model for predicting chlorophyll a from levels of P (dominantly), N and the N:P ration (Yalden and Elliot 2015). Under current conditions, the model predicts an average contribution to medium chlorophyll concentrations of 16% for all sites for TN and 69% for all sites for TP. This model was also extended to combine the effects of chlorophyll and sediment to predict water clarity.”

This shows that the TLG themselves determined P is $69/16 = 4.3$ times more important than N for algae growth.

- 4) N most difficult to change, while the more significant factors can be influenced

On farm mitigation options for controlling N leeching are extremely limited, whereas for P and sediment options are available. N travels through ground water and what we are seeing today is the result of activity tens of years ago. Conversely P and sediment are very mobile and move via surface water flows. These contaminants can be influenced much more quickly than N, by stock exclusion and riparian planting, and also have by far the biggest impact on Waikato river quality as shown above.

N loss for farms is currently estimated using the Overseer nutrient model. This model shows that the driver of N loss is primarily soil type, stocking rate and feeding regime used on farm. The major contribution to N loss is the high concentration of N in animal urine at key times in the year. The grass is not able to use all the excreted N before the N in urea form turns to nitrate. Nitrate is very mobile through many soil types. For a given soil type then, stocking rate is the main driver of N loss from a farm system. Stocking rate directly relates to production and therefore profit. So by setting limits on N loss calculated by Overseer, PC1 directly limits the economic output from our land.

The result of PC1 therefore is to severely limit productivity and wealth creation in the Waikato region in order to control a Nutrient discharge which, on the balance of evidence available, is not the driver of swimability or Fishlife in the Waikato river.

3) Suggested Alternative to N Benchmarking

The purpose of the proposed N benchmarking is to set a reference point for all farms, and to better understand the catchment in order to address future water quality gain targets, by allocation (see Policy 7, page 32 PC1). In the first 10 years PC1 also seeks to reduce N discharge from those with an N discharge exceeding the 75th percentile for dairy farming.

It is suggested that a robust method for understanding the N contribution from farming to the total catchment load, would be to set up long term monitor farms for key soil types/contours and land uses. There might 3 or 4 land use classifications, 3 soil types and 3 contours with say 10 farms monitored in each category ($4 \times 3 \times 3 \times 10 = 360$ farms) The results could then in the future be used to set some limits on the key factors that impact environmental limits (potentially stocking rate, effluent management etc) which would be set into some standardised farm environmental plans. Farms could then be allocated into like groups and be given 10-25 years as deemed achievable to adopt farming practices that comply with specific limits. In this way any future limits can be applied with consistency between farmers/iwi etc, eliminating discharge limits based on historical usage. The time frame would be long enough for existing investments to be recovered and new investments made. It is suggested benchmarks should be evaluated for years 2017/18 and 2018/19. It is also suggested that actual local water quality measurements should be made as part of this monitoring programme. All the data from the monitoring programme would then be used as inputs to a catchment wide model, in order to define land use suitability for the catchment and define good management practice. Land owners would be able to continue current land use indefinitely. However, if specific areas are identified as ideally being in an alternative use, then incentive schemes could be devised to make it worth farmers changing their land use in those specific areas.

Monitor farms would ideally be baselined each year by credible industry groups (DairyNZ, Beef and Lamb etc) minimising costs and maximising the accuracy of monitoring. Similarly, farming operations on soil types contributing high nutrient loss will be clearly identified. Industry driven research programmes can be established to address the major problem areas. As new technology becomes available to manage discharges, limits can be modified in Farm Environmental plans, depending on practices used on farm to drive changes needed to deliver on the long term Vision and Strategy.

Meantime, all the effort on farm associated with PC1 should go into reducing sediment and P losses. Addressing these will make a material difference to water quality, while not significantly influencing production or capital value. PC1 as it stands has too much investment required in paperwork and assessment, none of which directly helps water quality or motivates farmers to do what is actually needed – fence streams, create riparian buffers and manage hot spots such as fertiliser storage, run-off pathways from tracks, dairy effluent management etc.

I SEEK THE FOLLOWING DECISION BY COUNCIL

(select as appropriate and continue on separate sheet(s) if necessary.)

- Accept the above provision
- Accept the above provision with amendments as outlined below
- Decline the above provision
- If not declined, then amend the above provision as outlined below

Delete:

Policy 2 Item c, Policy 3 item c, 3.11.5.2 items 4 a) and b), 3.11.5.3 item 2, 3.11.5.4 item 5 first sentence and item 5 c, Schedule B in its entirety page 47, 5 a) and 5 b) on page 53

Add:

Specifically add the requirement for baselining of representative monitor farms as per section **3)** above into 3.11.4.7, requiring that the WRC set up the N and other Nutrient monitoring programme on representative monitor farms in collaboration with other credible industry stakeholder organisations.

THE SPECIFIC PROVISIONS OF PROPOSED PLAN CHANGE 1 THAT MY SUBMISSION RELATES TO

Please state the provision, map or page number e.g. Objective 4 or Rule 3.11.5.1 (continue on separate sheet(s) if necessary.)

Rule 3.11.5.7 Land Use Change, and Policy 16 development of Maori land

I SUPPORT OR OPPOSE THE ABOVE PROVISION/S

(select as appropriate and continue on separate sheet(s) if necessary.)

- Support the above provisions
- Support the above provision with amendments
- Oppose the above provisions

MY SUBMISSION IS THAT

Tell us the reasons why you support or oppose or wish to have the specific provisions amended. (Please continue on separate sheet(s) if necessary.)

1. Land Use change requiring consent will cripple farm succession and business viability

As outlined in the detail above concerning our own farm, it has changed substantially over the years. The farm has steadily grown by amalgamation with neighbouring blocks. We have also experimented with stock numbers, calving dates, feeding systems etc in an attempt to create a profitable business that is able to support the families (4) that rely on the farm. My wife and I have a 16 year old son and 2 daughters, one aged 13 and the other 18. We are trying to set the farm up so that at least one of our siblings have the opportunity to carry on the farming business following on from the 3 generations that precede them. This will require the farm to change and grow. However, with PC1 as it stands, any neighbouring dry stock land is very unlikely able to be appended onto the dairy farm.

Our run-off block presently in drystock needs to be merged with one of the neighbouring farms if it is to be anything other than a lifestyle block in the future. Rule 3.11.5.7 makes thus change difficult and costly if not impossible. The immediate effect is a loss of capital value, decreasing the land from \$25,000 to \$20,000/ha, this being the difference between dairy and intensive beef finishing land in our area. Across the 62 ha this is a loss of capital value exceeding \$300k.

2. Development of land no longer possible, even if the land is obviously suitable for the desired application

In policy 16 page 35, provisions are made for the development of maori owned land returned under treaty settlement and multiple owned maori land. I support this being possible, but not under the framework presented in PC1. My suggestion is that all land deemed suitable for a specific purpose be able to be developed without a resource consent, provided that development is made within the guidelines acceptable for that land use and land type.

I SEEK THE FOLLOWING DECISION BY COUNCIL

(select as appropriate and continue on separate sheet(s) if necessary.)

- Accept the above provision
- Accept the above provision with amendments as outlined below
- Decline the above provision
- If not declined, then amend the above provision as outlined below

Amend as follows:

Preferred Alternative:

Modify 3.11.5.7 so that this restriction applies only until Dec 2018. At that point, the WRC will define land usage suitability across the catchment. Land within specific usage suitability areas may then be developed with a suitable Farm Environmental Plan without a resource consent. Land use change outside that permitted by the suitability definitions or outside of the FEP would require a resource consent. This suggestion means all land owners, including iwi groups, can improve the productivity of the land within limits.

Another alternative:

Another alternative that could alleviate the issues in our own situation, is to recognise dairy farm operation in the past that ceased prior to 2014/15 or 2015/6.

In this way appending our runoff block (previously dairy) to a neighbouring dairy farm either by myself or one of those parties would not require a resource consent.

THE SPECIFIC PROVISIONS OF PROPOSED PLAN CHANGE 1 THAT MY SUBMISSION RELATES TO

*Please state the provision, map or page number e.g. Objective 4 or Rule 3.11.5.1
(continue on separate sheet(s) if necessary.)*

Schedule 1- Requirements for Farm Environmental Plans

I SUPPORT OR OPPOSE THE ABOVE PROVISION/S

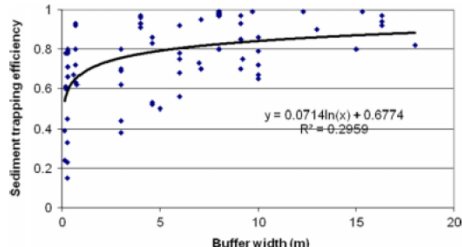

(select as appropriate and continue on separate sheet(s) if necessary.)

- Support the above provisions
- Support the above provision with amendments
- Oppose the above provisions

MY SUBMISSION IS THAT

*Tell us the reasons why you support or oppose or wish to have the specific provisions amended.
(Please continue on separate sheet(s) if necessary.)*

FEPs need to be practical for farmers to produce and implement. PC1 calls for individual FEP's to be developed by certain dates. There is a lot of detail being asked for in these FEP's, some of which changes each year, e.g. cropping programmes. Each year many farmers use crops to provide summer or in some cases winter feed, often as part of a re-grassing programme. Re-grassing is an absolutely critical activity to maintain highly productive pastures. Pasture underpins the NZ animal production system. Cropping is critical for economic pasture renewal on land with slopes >15 degrees. The FEP requirements need some modification to enable practical cropping and re-grassing practices. My requests for change are listed below.

Page No	Reference	Support or Oppose	Decision Sought	Reason
51	2 (b) (ii)	Support with modification	– delete “for land with a slope of less than 15° and 3 meters for land with a slope between 15° and 25°”	1 m setback achieves removal of the bulk (70%) of sediment. Keep it simple at 1m requirement. Many farmers will use bigger setbacks where they want to add plantings. However the research is clear that grass is better at stripping out sediment and P than trees.
51	2 (b) (iii) –	Support with modification	5 m cultivation set back: change 5 to 2 m	<p>As above, USA work shows 70% benefit at 1m, 80% at 5m. A good compromise minimising the loss of productive land would be 2m. The additional benefit of 5m is very small relative to the loss of productive land. Remember this land is owned and paid for by land owners. PC1 is removing existing property rights, so no more strip width should be taken than needed.</p>  <p>Figure 1. Buffer width and sediment trapping efficiency.</p>  <p>Riparian set back performance Yaun et See also NZ research Parklyn (2004) Review of Riparian Buffer zone (MAF), http://www.biol.canterbury.ac.nz/ferg/MacKenzie%20project/PDF/Riparian%20management/upper-waitaki-submitter-evidence-maf-technical-paper-review-riparian-buffer-zone-effectiveness.pdf</p> <p>This work shows that 90% of incoming sediment was removed in the first 0.6m. The 2m proposed above is therefore more than sufficient.</p>
52	2 (d) (v)	Oppose	Remove requirement to document “suitable management practices for strip grazing”.	Why do we need to document suitable practices for strip grazing? This is common practice and use in Autumn and winter. If anything, the FEP could document winter grazing practices used on farm including any use of standoff or particular paddocks in very wet weather.
52	2 (f) (i)	Oppose	Remove the differentiation between land of less than and greater than 15°	Light cultivation for pastures greater than 15° is needed for re-grassing. Cultivation areas on pastoral farms vary every year
52	2 (f) (ii)	Support with modification	Change 2 (f) (ii) to: “Document the typical cropping and re-grassing practices used on your farm. Describe the different practices	Cultivated areas change every year. Steeper paddocks still require regrassing and growing of low till crops is common practice with little evidence of significant run off issues. Modify this section to encourage the

			used on the farm as required to manage slope, soil type and grazing/harvest management. This should cover:"	farmer to document the practices used for different crop types and include grazing/harvest of the crop as well.
52	2 (f) (ii) (d)	Support with modification	Change "(minimum 5m setback)" to "(minimum 2m setback)"	As for 2 (b) (iii) above
52	2 (f) (ii) (e) and (f)	Support with modification	These should be their own section within 2) – they are not part of cultivation	Drafting error

THE SPECIFIC PROVISIONS OF PROPOSED PLAN CHANGE 1 THAT MY SUBMISSION RELATES TO

Please state the provision, map or page number e.g. Objective 4 or Rule 3.11.5.1 (continue on separate sheet(s) if necessary.)

Schedule C- Stock Exclusion

I SUPPORT OR OPPOSE THE ABOVE PROVISION/S

(select as appropriate and continue on separate sheet(s) if necessary.)

- Support the above provisions
- Support the above provision with amendments
- Oppose the above provisions

MY SUBMISSION IS THAT

Tell us the reasons why you support or oppose or wish to have the specific provisions amended. (Please continue on separate sheet(s) if necessary.)

Fencing streams appears to be one of the main tools farmers have to make a difference to water quality. Where this process is practical and affordable, support this intent.

I am aware that on some extensive dry stock properties, the rules outlined in Schedule C uneconomic and likely not needed in the present form.

I support the Federated Farmers position on this matter.

In addition see my request below.

Page No	Reference	Support or Oppose	Decision Sought	Reason
50	4 (a)	Oppose	Delete the requirement for P1 areas to be implemented by 2023 and change this to 2026.	Why should some farmers be required to complete this work before others? These farmers are disadvantaged relative to others. Consistency of rules and fairness is important.

PLEASE INDICATE BY TICKING THE RELEVANT BOX WHETHER YOU WISH TO BE HEARD IN SUPPORT OF YOUR SUBMISSION

- I wish to speak at the hearing in support of my submissions.
- I do not wish to speak at the hearing in support of my submissions.

JOINT SUBMISSIONS

- If others make a similar submission, please tick this box if you will consider presenting a joint case with them at

the hearing.

IF YOU HAVE USED EXTRA SHEETS FOR THIS SUBMISSION PLEASE ATTACH THEM TO THIS FORM AND INDICATE BELOW

Yes, I have attached extra sheets.

No, I have not attached extra sheets.

SIGNATURE OF SUBMITTER

(or person authorised to sign on behalf of submitter)

A signature is not required if you make your submission by electronic means.

Signature Mark Harris

Date 6 March 2017

Personal information is used for the administration of the submission process and will be made public. All information collected will be held by Waikato Regional Council, with submitters having the right to access and correct personal information.

PLEASE CHECK that you have provided all of the information requested and if you are having trouble filling out this form, phone Waikato Regional Council on 0800 800 401 for help.