Before Hearing Commissioners at Palmerston North

under: the Resource Management Act 1991

in the matter of: Submissions on Chapters 6, 13 and 15 of the Proposed One Plan

between: **Fonterra Co-operative Group Limited**
Submitter

and: **Manawatu-Wanganui Regional Council**
Respondent

Statement of evidence of Gerard Matthew Willis for Fonterra Co-operative Group Limited

Dated: 30 October2009

REFERENCE: S M Janissen (suzanne.janissen@chapmantripp.com)
N McIndoe (nicky.mcindoe@chapmantripp.com)

Chapman Tripp
T: +64 4 499 5999
F: +64 4 472 7111

10 Customhouse Quay
PO Box 993, Wellington 6140
New Zealand

www.chapmantripp.com
Auckland, Wellington,
Christchurch

STATEMENT OF EVIDENCE OF GERARD MATTHEW WILLIS

QUALIFICATIONS AND EXPERIENCE

1 My full name is Gerard Matthew Willis.

2 I am a director of Enfocus Ltd, a resource management consultancy based in Auckland. I have practiced as a planner and resource management specialist for the past 20 years. I hold a Bachelor of Regional Plannning (Hons) degree from Massey University and am a full member of the New Zealand Planning Institute.

3 My previous experience includes four years working as a policy planner in local government here and in the United Kingdom. I spent a further eight years as an environmental analyst within the Ministry for the Environment, starting in that role shortly after the enactment of the RMA, and subsequently advised local authorities on the preparation of "first generation" district and regional plans and authored official guidance on the Resource Management Act (*RMA*). During my time with the Ministry, I spent four years as environmental adviser to the then Minister for the Environment, Simon Upton, and had a role in almost all amendments to the RMA during the 1990s. Since 2001 I have been a planning and environmental consultant establishing my own practice in 2002. In that capacity I have acted for a number of district and regional councils on planning issues and provided advice to companies and government agencies on a broad range of environmental policy issues (including more recent amendments to the RMA and national policy statement and national environmental standard development).

4 I have read the Environment Court's Code of Conduct for Expert Witnesses, and I agree to comply with it. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise, except where I state I am relying on what I have been told by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

5 I am familiar with the Proposed One Plan (*POP)* to which these proceedings relate.

SCOPE OF EVIDENCE

6 My evidence will deal with the following:

6.1 A planning assessment of the POP's approach to managing nitrogen leaching from intensive farms (*N-loss*) and water takes;

6.2 A description of Fonterra Co-operative Group Limited's (*Fonterra*) recommended amendments to Chapters 6 and 13 of the POP;

6.3 A planning assessment of the POP's approach to managing water takes (particularly the permitted activity rules as they relate to stock drinking water and dairy shed water); and

6.4 A description of Fonterra's recommended amendments to Chapter 15 of the POP.

SUMMARY OF EVIDENCE

7 The overall approach taken by Horizons to the management of water does have planning merit. Its appropriateness in terms of consistency with Part 2 (and section 32) of the RMA, however, depends on getting many matters of detail right. In my opinion Horizons has not got those matters of detail right in the POP as notified (or as proposed to be amended by officer reports).

8 In deciding to take a direct interest in N-loss, the POP needs to address three challenges. First, it needs to set the *desired outcome* at a level that is achievable and that communicates honestly with the regional community what the plan will deliver. I do not believe that the POP currently does this as it tends to over-promise and under-acknowledge costs. In short, the desired outcomes (expressed as objectives) are not linked closely enough to the design of Rule 13-1 and associated provisions. From Fonterra's perspective this poses an unacceptable level of uncertainty and risk to farmers whose future resource consent applications stand to be judged against objectives for receiving waters that we know cannot be met over the life of the plan (except with very significant social and economic distruption). To address this, the objectives of Chapter 6 need to be revisited to acknowledge their long term aspirational nature and to reduce their absolute and unqualified expression.

9 Secondly, the *transition* from a long standing unregulated N-loss world to the new more tightly regulated regime needs to be carefully managed over a realistic timeframe. I believe that the haste embedded in the provisions of Chapter 13 is unnecessary and will militate against a successful transition. I also believe that, by denying existing intensive farms the opportunity to demonstrate the effectiveness of non regulatory methods, the plan misses an opportunity to achieve progress at low cost and risks entrenching negative attitudes amongst those on whose actions future water quality relies. To resolve this I propose that the dates at which Rule 13-1 applies (the *Dates of Obligation*), which are not based on any scientific imperative, be set back five years. During this period the dairy industry will work with dairy farmers to reduce N-loss. I

consider that it is reasonable that the dairy industry must show that progress can be made through non regulatory methods, but where it can do so, I consider that the onus should be on Horizons to remove the obligation to comply with Rule 13-1. For that reason, I propose that a method be included in the POP such that Horizons will review the effectiveness of non regulatory methods after five years and initiate a plan change to remove Rule 13 (as it affects the dairy industry) if sufficient progress has been made.

10 Setting aside the issue of the effectivenes of non regulatory methods, and assuming that Rule 13-1 prove does apply after five years, I consider that the transition should be smoothed through the use of an approach to setting N-loss values at Year 1 that provides for those farms that cannot meet the N-loss values under the LUC/natural capital approach to begin with an allowed N-loss value equivalent to the average annual N-loss per hectare over the period 2006-2009. That approach may be described as a natural capital/grandparent *hybrid* approach. I also propose that the approach to reducing N-loss entitlement over a 5, 10 and 20 year timeframe be modified so that all farms in targeted Water Management Sub-zones pursue an N-loss reduction of 10% over ten years but that convergence with the POP's proposed 20 year N-loss values be provided for as a desired future state (although the achievement of the 20 year values in practice is likely to be dependent on technological advances and for that reason those values will need to be reassessed at the time of the next plan review).

11 The third challenge is to get the level and design of regulatory control right so that it creates the right incentives and avoids perverse incentives (i.e. is "smart" regulation). In my opinion Rule 13-1 as proposed by POP is not smart regulation since it imposes the same level of control and administrative cost over farmers with low N-loss rates as those with high N-loss rates. Furthermore, it focuses attention on existing N-loss when the greater risk to outcomes is posed by *future increases* in N-loss arising from intensification of existing dairying and conversion of currently non intensively used land to intensive use. My proposed solution is to redesign Rule 13-1 so that it provides a "safe haven" opportunity - meaning farms that comply with the specified N-loss values proposed by Table 13.2 of POP (increased in relation to LUC classes III – VI) are permitted activities. Such farms would need to demonstrate compliance through professionally prepared nutrient budgets (which are already required of Fonterra suppliers).

12 My proposed redesign of Rule 13-1 would retain controlled activity status for farms that cannot meet the N-loss values of Table 13-1 (as included in POP as notified) and all new conversions. That matches regulaton to risk. Importantly though, the Year 1 N-loss values that must be complied with by controlled activities would not

be the value in Table 13.2 as proposed by POP, but rather the grandparented value discussed above. This will avoid a great many farms becoming discretionary activities on day one of the date of obligation. Farms that cannot reduce N-loss at a rate equivalent to 10% over the first 10 years would become restricted discretionary activities. In my view such a regime would be superior than that proposed by the POP because it creates an incentive for early action (to qualify for permitted activity status) and greatly reduces the consenting burden while retaining regulatory scrutiny over activities that pose the greatest risk.

13 To acknowledge the difficult position that some existing farms will face under this new regime (and to acknowledge that these farms established lawfully without forewarning that regulation of the nature now proposed - that potentially undermines commercial viability - could eventuate) I propose that an additional policy be added to Chapter 13. That policy would make clear that in considering resource consents the Regional Council will have particular regard to the impact on farm viability. I also propose that a policy expressly providing for N trading[1] be included as a means by which the cost of N-loss reduction can be minimised.

14 Finally, I suggest that Rule 15-1 that addresses permitted water takes needs significant revision. This rewording should distinguish between stock drinking water takes (which are expressly provided for under the RMA) and minor takes for other purposes (such as takes for dairy shed needs). I propose that the rule be redesigned so that it allocates water not on a crude uniform volume per property basis but rather in a way that better matches permitted entitlement to potential demand. I have put forward a rule that varies permitted entitlement by property size and use.

15 All proposed rewording of provisions is provided as **Attachments 1-8**.

PROVISIONS IN RELATION TO WATER QUALITY

16 The water quality provisions of the POP are set out in Chapters 6 and 13. Fonterra's submission opposes:

16.1 The objectives and policies of Chapter 6 that establish the values and standards of Schedule D as the absolute and unqualified outcomes to be sought by the POP;

16.2 The objectives and policies of Chapter 13 to the extent that they establish the values and standards of Schedule D as matters to be achieved through decisions on resource

[1] Something Horizons staff have assured Fonterra is anticipated but which is not expressly provided for in the provisions of POP.

consents for discharges with insufficient regard to the variability of effect on existing dairy farmers; and

16.3 Rule 13.1 of Chapter 13 that regulates dairy farming (and other intensive land use) in a way, and at a rate, that pays insufficient regard to impacts on the dairy sector and the social and economic welfare of the Region.

17 I will return to how these provisions might be recast to better reflect Part 2 of the Act after discussing the conceptual underpinnings of the wider approach taken by POP to managing water quality and the inherent flaws in that approach.

POP's Approach to Managing Water Quality

18 The Proposed One Plan's approach to managing water quality (in relation to agricultural discharges) may be summarised as follows:

- Define Water Management Zones (*WMZs*) and subzones;
- Identify the environmental and community values associated with those zones;
- Define receiving water standards to reflect the individual WMZ sub-zone values;
- Define standards for N-loss discharges that will promote the receiving water standards; and
- Impose consent requirements and permitted activity conditions on land use and discharges to ensure all sources of N are managed within defined limits.

19 From a planning perspective, this approach has a superficial logic. However, its appropriateness in terms of good planning practice (having regard to matters such as the net benefit, the equity of cost sharing and ultimate effectiveness of the approach) depends on many matters of detail which I believe are not appropriately addressed in the POP as notified (and as proposed to be amended by Horizon's officer reports).

Relevant Planning Principles and Organising Themes

20 The planning principles I have applied to my analysis of the POP Chapters 6 and 13 provisions are as follows:

20.1 *Equity* – the different starting positions of farms caught by the new water quality management regime need to be recognised. In the absence of long term signalling of the introduction of N-loss limits, farmers should not be required to face widely uneven costs of compliance. Farmers should not have to bear costs to address effects not of their making.

20.2 *Flexibility* – planning provisions should provide flexibility such that required actions can be tailored to individual circumstances. This includes the ability for farmers to seek least cost means of compliance.

20.3 *Outcomes* – planning provisions should focus on outcomes at the catchment scale. Consistent with the principle of flexibility outlined above, how N-loss is achieved and whether there are uniform reductions across properties is not material.

20.4 *Sustainability* – planning provisions should promote sustainability such that, wherever possible, environmental outcomes are achieved at the same time that people are enabled to provide for their social and economic needs. The achievement of environmental sustainability at the expense of existing individual businesses is not acceptable (and *vice versa*).

20.5 *Sanctity of land use rights* – the right to use land in pursuit of individual benefit needs to be maintained. Consistent with the presumption in section 9 of the RMA, an individual's right to use land should only be encumbered where more direct control of externalities is not feasible.

21 Taking account of the above principles, the planning issues associated with the POP's approach to managing water quality can be grouped into three organising themes:

(a) Setting the desired outcome;

(b) Managing the transition; and

(c) The level and design of regulatory control.

These matters, and Fonterra's suggested remedy, are discussed in the following sections.

Setting the desired outcome (objectives for water quality)

22 Theory usually suggests that setting outcomes precedes the process of designing the policies and rules to deliver that outcome. In practice, however, the setting of objectives and the designing of policy responses is an iterative process with one informing the other. If the policies to achieve an objective prove, on analysis, to be too costly, and there is no less costly alternative, the objective may need to be revisited and set at a less ambitious level (including perhaps rethinking the timing aspects)[2].

[2] This is consistent with the Quality Planning Guidance Note on Section 32 which states that in considering the appropriateness of an objective [as required by s.32(3)(a)] the *achievability* and the *reasonableness* of that objective should be

23 While aspirational goals are laudable, plan objectives that help determine the acceptability of activities through the setting of conditions for permitted activities or through consideration of resource consent applications have to be realistic with their costs and benefits known in advance.

24 Dr Michael Scarsbrook's evidence outlines issues relating to the way some of the management objectives and associated standards have been derived. The difficulties I have with the Objectives of Chapter 6 of the POP (linking as they do to the management objectives and standards of Appendices Ba and D) is that they are too absolute. I reach that view because of the following matters:

24.1 Although Horizons' witnesses claim rigour and robustness to the setting of the WMZ water quality standards, evidence shows that there are many unknowns, uncertainties, assumptions and simplifications being made;

24.2 It is clear that the water quality values and standards will not and cannot be met within the term of the POP without wholesale change in existing land use and restrictions on future land use change. That is something that would create unprecedented social and economic disruption that would be contrary to Part 2 of the Act. This is acknowledged by Rule 13.1 which is not in fact designed to deliver the water quality objectives and standards of Chapter 6. That has been acknowledged by Horizons in the evidence of Dr Jonathon Roygard[3]. The 20 year planning horizon of N reduction per hectare is a further acknowledgement that objectives cannot be met within the life of a regional plan with a nominal life of 10 years. It seems that what has happened in the plan development process is that there has been no revisiting of the water objectives to reflect what the plan policies will actually deliver within a 10 year planning horizon.

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considered. See http://www.qualityplanning.org.nz/plan-development/implementation.php.

[3] Dr Roygard's evidence reveals (pages 180-183) that the relationship between the outcomes expected from compliance with Table 13.2 and the achievement of water quality standards has only been studied in two catchments – the Upper Manawatu and the Mangatainoka). The results of the study in the Manawatu are that at Year 20 the non point source target N load would be 751 t/y (up from 745 t/y in Year 1) and 110% above Appendix D's water quality standard of 358 t/y. In the Mangatainoka, the Year 20 non point source load target of 301 t/y will still be 13% above Appendix D's standard of 266 t/y. The Mangatainoka example demonstrates the size of the challenge presented by the water quality standards with the Year 1 target being over 40% below the current measured load. Admittedly, these studies assume full take up of N-loss entitlement – something that may not occur in practice. On the other hand, they do not account for point source discharges nor do they account for farms that cannot meet the Table 13.2 targets but have consents enabling them to continue to operate (an inevitable outcome of the approach proposed).

25 In the absence of this, Chapter 6 of the POP contains objectives that represent a rather disingenuous promise to the Manawatu-Wanganui community. In planning terms I consider this to be highly problematic. There is an obvious lack of transparency but more importantly there could be quite unreasonable consequences associated with the application of those provisions in practice. Applications for resource consent (including, as currently worded, applications for 468 dairy farms in targeted WMZs) would be assessed against objectives relating to desired receiving water quality that are simply disconnected from the applicable standards of discharge (N-loss values). That reduces certainty and opens up the opportunity for applications to be assessed on the basis of unobtainable receiving water standards.

26 The solution to this issue is to revisit the objectives of Chapter 6 to:

(a) Ensure that these are articulated as aspirational, long term desired outcomes rather than short term (10 year) targets to be applied in the context of resource consent applications for diffuse discharges;

(b) Reduce the absolute nature of these objectives such that (i) there is an acknowledgement that the determination of resource consents will not be driven by a desire to achieve, in the short term, unrealistic objectives; and (ii) allowance is made for the need to phase in improvement over time (being a period that extends beyond the life of the plan).

Managing the Transition

27 The critical issue is not just the level at which objectives are set but the timescale over which the change required to management practices is introduced. Careful management of the transition from current state (and current land use practices) to the desired future state (with modified land use practices) is *the* critical issue of Chapter 13 of POP.

28 Dr Scarsbrook, Mr Duncan Smeaton, Dr Terry Parminter and Mr Matthew Newman have all highlighted aspects of the proposed transition which suggest that an alternative set of planning provisions relating to the transition would be advisable.

29 In summary, those witnesses have made a case for a more measured introduction of N-loss limits within the targeted WMZ subzones. The reasons being:

(a) Evidence shows that water quality within the targeted WMZs subzones has not declined in recent years and that there are clear signs of water quality improvement in the Region's major rivers. Although the impact of N-loss on water quality is accepted, the of evidence of recent water quality

improvements means there is not the urgency to act as is currently implied by the POP;

(b) Although the science tells us there are many ways to reduce N-loss, experience has shown that there are practical and financial barriers to the adoption of many of these measures "on-farm". While some of these barriers are surmountable they do suggest that a realistic transition period is required; and

(c) Due to the nature of the issues and the investment and change in on-farm practices required to meet N-loss targets, a longer transition into the regime will reduce costs to farmers and allow for more effective budgeting.

30 It must also be recalled, as Mr Sean Newland reminds us, that the move to regulating N-loss is an entirely new concept in the Manawatu-Wanganui Region and is indeed unique in New Zealand in terms of both the scale of effect and the rigidity of the obligations.

31 N-loss from intensive farming has been occurring in the Region for some 150 years. We are moving from a state where that has been completely unregulated to a position where 50% of the dairy farms in the Region need resource consent within five years and perhaps 50% of those will need to modify their practices and/or invest in capital items and/or sacrifice potential profit in order to comply with Year 1 targets and most will need to do so to meet Year 10 targets.

32 It is my view (consistent with the evidence of Terry Parminter) that such haste is neither necessary nor likely to build the support required for durable, long term and socially embedded behavioural change. The difficulty of making a change of this nature – transitioning from an assumed right to a strictly controlled privilege should not be under-estimated.

33 Accordingly, I consider that the planning provisions under-estimate the difficulty of that transition and are, in that context, unreasonable.

Planning provisions providing the transition

34 In planning terms, the transition into the N-loss regime is comprised of three parts:

- The date at which WMZs and subzones come within Rule 13.1 (*the Date of Obligation*) as set out in Table 13.1;

- The LUC-specific nitrogen leaching/run-off values (*N-loss Values*) of Table 13.2 (the value determines when a farm must do something different to business as usual); and

- The rate at which the N-loss entitlement in Table 13.2 decreases over time (*Rate of the Sinking Lid*).

I discuss each of these in turn below.

Date of Obligation

35 There is nothing sacrosanct about the Dates of Obligation. Horizons' own evidence[4] states that the dates set out in Table 13.1 are set to spread the administrative burden on Horizons and ensure the workload can be met within the existing level of resourcing (including the capacity of the farm consulting sector). There is no evidence that there is some ecological tipping point that determines the Date of Obligation. Delay only sets back the date at which benefits can be expected and does not necessarily mean benefits are more difficult or more costly to achieve.

36 On the other hand, a delay in the Date of Obligation provides time to raise awareness amongst the farming community of the obligations associated with Chapter 13 of POP, the reasons why change is required and to build understanding of the ways in which farmers may comply at least cost and disruption to their farming operations. Rather than commencing obligations as POP emerges from the hearing process (and before possible future appeals are settled), I suggest that there ought to be a socialisation and adjustment phase of at least five years prior to any new regulatory regime taking effect anywhere in the Region.

37 It is worth noting here that such a period will allow farmers the opportunity to adjust *voluntarily* prior to commencement dates so as to avoid unwelcome regulatory imposition once that date arrives. In that regard, we can expect action "on the ground" sooner than the commencement dates of Table 13.2. Indeed, under the regulatory model suggested later in this evidence this is a key element in the effort to "design-in" the right incentives for behavioural change.

38 Furthermore, given that there is commitment by Fonterra to lead change through non regulatory programmes, I consider that a method should be introduced to the POP stating that the need for Rule 13-1 to apply to any or all of the farming types listed in that rule, should be reviewed after five years of the plan becoming operative. That method should further state that if, on the basis of modelled N-loss, sufficient improvements in per hectare N-loss in targeted Water Management Sub-zones are apparent, then a plan change would be initiated to remove the application of Rule 13-1 to that farming type. (In other words, if N-loss improves from dairy farming then the application of the rule to dairy farming would be removed).

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[4] See pages 16-17 of the evidence of Helen Marr.

39 This approach would be consistent with Horizons' obligations under section 35(2)(b) of the RMA to *monitor the efficiency and effectiveness of policies, rules or other methods …and take appropriate action* [emphasis added] *… where this is shown to be necessary*. This obligation is, course, in the context of section 35(2A) which states that:

> *"Every local authority must, at intervals of not more that 5 years,* [emphasis added] *compile and make available to the public a review of the results of its monitoring under subsection 2(b)".*

40 Thus the method proposed would simply confirm what Horizons is required to do under the RMA but it would make clear how that obligation is to be met with respect to its N-loss plan provisions.

41 In summary, I consider that there should be an opportunity for the dairy farming sector to demonstrate that it can make the necessary change through non regulatory means. However, I accept that should that prove not to be the case, then Horizons needs to have a regulatory regime in place to be able to secure change at a reasonable rate (without opening up the matter again to a first schedule process). This might be described as the *Default Regulatory Regime*. The balance of this evidence focuses on the design elements of that *Default Regulatory Regime*.

Year one entitlement

42 The use of LUC as a basis to allocate N-loss entitlement (derived as it is from the notion of "natural capital") has some planning merit. As other witnesses have pointed out, the LUC approach ensures that existing land use is not locked in place and therefore maintains development opportunities. The LUC acts as a proxy for potential land use and varies provision for N-loss according to where intensive uses are "best" located to take advantage of the natural capital.

43 The downside of the LUC/natural capital approach as the basis for initial allocation of N-loss entitlement is that it fails to recognise different starting positions of existing farms. It seems that some farmers will comply with 1, 5 and even 10 year N-loss entitlement limits while others will not even comply in Year 1. The costs fall highly variably where a natural capital approach is used for the initial allocation of N-loss entitlement. To put it another way, the transition is easy for some but difficult and costly for others[5]. Although this variation in cost may (in an approximate way) recognise the different levels of effect, it does not recognise that all

[5] Dr McKay acknowledges this in part when he says at Page 10 of his evidence that "*It* [the LUC approach] *disadvantages high input, highly productive farms on soils with little inherent natural capital".* The LUC approach also disadvantages properties in high rainfall areas. Of particular concern is the 19% of dairying that occurs on Class VI land with an initial allocation of just 10 kg/ha/year.

farmers established lawfully and with no expectation that their activity would be variably regulated in the way now proposed. In my opinion the design of any rule needs to acknowledge the legitimate expectations of all farmers and provide a transition that does not unfairly penalise some more than others.

44 The Year 1 values of Table 13.2 represent a modelled *average* potential production scenario with N-loss rates modelled according to that average (with adjustments to reflect the devotion of a percentage of land to uses that are not associated with elevated rates of nitrogen leaching). From a regulatory design perspective, that is a reasonable approach to establishing a benchmark as an indicator of acceptable performance[6]. In that sense I would argue that it would be suitable (subject to some adjustment for values for in Class III to VI land[7]) as a trigger between a permitted and consentable activity. It is does not, in my view, represent a sensible, fair or equitable approach to transitioning farmers into a N constrained world. To apply this approach to regulatory design is to consign all farms with greater than average N-loss for their LUC to a position where they cannot comply on the first day obligations commence.

45 I broadly agree with Dr Alec MacKay's review of approaches to managing N-loss entitlement. However, I consider that the evidence is incomplete as it does not consider *hybrid* approaches. In particular, the analysis in the evidence does not distinguish between: (a) the role in providing the framework for management and target setting over time; and (b) the role in providing the basis for *initial* N-loss entitlement.

46 The LUC approach is appropriate to the extent that it attempts to manage N according to the level of productivity appropriate to the natural capital of land (setting aside for the moment the issues associated with the LUC classification system as discussed by Mr Newland). I accept therefore that it could play the role described in (a) above. But that does not mean that it must necessarily also play the role described in (b) above.

47 Little evidence has been presented by Horizons on the degree to which existing farms comply with the Year 1 values of Table 13.2, despite that being the critical element to determining the cost of the overall approach. The evidence of Mr Peter Taylor on the FARM Strategy and (separately) Jeremy Neild and Anthony Rhodes on the economic impacts refer to, and use information from, the "FARMS test farms" project. That project considered case studies of 20

[6] Although some adjustment may be necessary to ensure there is some allowance for the inaccuracies of the LUC and the ability of farmers to improve land beyond its theoretical LUC class with, necessarily, high level of N input.

[7] Refer to the evidence of Mr Duncan Smeaton for further explanation of the rational for adjusting the Year 1 values for LUC Classes III to VI.

"intensive" farms[8] and found that 11 (55%) did not comply in Year 1 and of those, four farms could not meet Year 1 targets without major change to their current farm operations[9].

48 Fonterra commissioned a study of six farms in 2008[10]. That study found that one farm would not comply with Table 13.2 values at Year 1[11].

49 The evidence of Mr Duncan Smeaton discusses the likely compliance with the N-loss values of Table 13.2 as proposed in more detail.

50 Although evidence is partial, it is clear that using the LUC approach as proposed, at Year 1 a great many farms will not comply with N-loss values of Table 13.2 and may fall to be considered as discretionary activities. I consider it poor practice to establish a new regulatory regime for a previously unregulated activity when it is known at day one that there will be significant inability to comply. That is not a transition but rather an imposition and one that is unreasonable. It is doubly unreasonable, in my view, where the regulator cannot say with any real certainty how many farms will be affected.

51 My solution to this conundrum is to apply a *hybrid* natural capital/grandparent approach as a means of greatly reducing cost and increasing equity. Such an approach would retain the LUC approach but allow an initial allocation based on grandparented N-loss where it was necessary to do so. How this approach would work and how it dovetails into other proposals to create appropriate incentives is discussed later in this evidence.

Rate of the Sinking Lid

52 Table 13.2 sets N-loss values for years, 5, 10, and 20 that vary by LUC class. The rate of decline (or the "Rate of the Sinking Lid") varies across LUC Class I to IV land[12] between:

- 0% on Class IV land and 16% on Class I by Year 5;
- 13% on Class IV and 24% on Class II by Year 10.

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8 These case studies were not selected to be representative samples and this reduces the confidence in the results.

9 Neild and Rhodes report different results to those reported by Taylor suggesting that of the 22 case studies, 17 proved to have N-loss levels above the Year 1 target values

10 One Plan – An alternative approach and compliance requirements, Yates et al, Massey University, August 2008

11 The same study found that only two farms would still comply at Year 10.

12 76 % of all dairying in the targeted Water Management Subzones occurs on Class I-IV land. Another 19% occurs on Class VI land

53 Horizons' evidence for this rate of decline suggests that the rate is based on a combination of existing industry commitments and an assessment that up to 30% declines can be made with available technology. Both those claims are disputed by Fonterra witnesses.

54 Based on the evidence of Mr Newland and Mr Smeaton I suggest that an appropriate rate of decline would be 10% over 10 Years. That rate is suggested by Mr Smeaton as the lower of the range that can be achieved (on average) without a significant effect on farm profit.

The level of regulatory control

55 Rule 13-1 proposes that every dairy farm in targeted Water Management Subzones should be a controlled activity.

56 In my opinion, all regulation - but particularly regulation addressing a new issue that will inevitably impose costs and risk attracting widespread dissention - needs to be *smart regulation*. Smart regulation has a number of key attributes:

56.1 Regulatory design should seek to use the *threat* of regulation as the primary means of incentivising behavioural change rather than the regulation itself.

56.2 Regulatory design should seek to provide the potentially regulated with an opportunity to demonstrate compliance with transparent, quantifiable performance standards as a means of avoiding consent procedures (an approach sometimes referred to providing a "safe haven"). In the RMA context this means that if an activity can comply with the applicable N-loss performance standard – and a resource user can demonstrate compliance – then that activity should be permitted.

56.3 Regulation should be designed according to a rational risk management framework. This will generally mean that regulation occurs where (and only where) there is a need to make significant and urgent change in behaviour because of an extant problem. If the risk is an anticipated future change in circumstances, regulation should be directed to that future risk.

57 Regulatory design that seeks to address an extant problem should focus of improving the performance of the laggards rather than forming the primary means of promoting widespread behavioural change (the need for which is not already accepted across large parts of the affected community). Blunt regulation of those who have performed well risks perverse behaviour. Regulation should ensure the good work of early adopters is not undermined by others

and that "free-riders" (those who benefit from outcomes but who do not contribute to those outcomes) pay the cost[13].

58 In my opinion, Rule 13-1 (and associated provisions) do not reflect these principles of smart regulation. The regime proposed fails to:

- Acknowledge the opportunity to incentivise voluntary action by the sector as a whole;
- Acknowledge that the lure of permitted activity status can be a powerful incentive for behavioural change for individual farmers;
- Provide for farmers to demonstrate compliance with reasonable standards and thereby avoid more onerous consent obligations; or
- Apply a risk management approach that focuses regulation on risk to future achievement of receiving water quality (being future dairy expansion in key areas) rather than existing, relatively modest, N-loss dairy farming.

59 A final point to be made in respect of the Rule 13-1 regime is that by incorporating previously permitted activities within its single, integrated consent it misdirects regulation onto low risk activities such as discharges from feed storage and offal holes) and is unnecessarily provocative. (Since it extends resource consent obligations onto activities that had previously been permitted while conferring little added value for Horizons or for affected farmers). It seems predominantly an exercise in policy-makers' tidy-mindedness and is inconsistent with the principles of smart regulation already outlined.

FONTERRA'S ALTERNATIVE WATER QUALITY PROVISIONS

60 For the reasons given above, Fonterra proposes an alternative approach to managing impacts of water quality from dairy industry that it believes will lead to improved on-farm environmental performance in a way and at a rate that allows the dairy industry to prosper while still securing over time the outcomes important to the regional and national community.

61 Importantly, the approach I propose retains all key elements of the POP approach as set out in paragraph 18 of this evidence. However, various changes are proposed to the way and extent that these elements apply. These are discussed below.

[13] I note here consistency with the evidence of Dr Parminter in which he suggests that, to encourage social learning, rules should affect the activities of about 20% of the targeted population operating outside the new norm.

Objectives of Chapter 6

62 The problem with the objectives of Chapter 6 discussed earlier (the unrealistic nature of what it proposes in the timeframe of the plan) is partially recognised by the amendment to Objective 6-1 now proposed in the Officers' report. That amendment proposes that Objective 6-1 indicate that water bodies are to be managed for the values of Schedule Ba (as part of Schedule D has now become) "by 2030".

63 That is an important change and one that I support. However I do not consider that it goes far enough. The reality is that the plan rules – appropriately - provide for water bodies to be managed in ways where some of the values may not be provided for some time. That is, there is an implicit allowance for water bodies to continue in a state that does not fully, or always, provide the range of values accorded. This implicit intent should be recognised.

64 Furthermore there has, as Matthew Newman has pointed out, been no proper cost benefit evaluation of the attainment and retention of the water values. When the true cost of managing water bodies to some of the values is fully appreciated by affected communities there may well be greater acceptance that desired values should not be rigidly applied. For that reason some level of *flexibility* is, in my view, appropriate.

65 For those reasons I suggest that Objective 6-1: Water management Values should read (additional text underlined):

Surface waterbodies are managed in a manner which, <u>to the extent practicable given land use within contributing catchments</u>, safeguards their life-supporting capacity and recognises and provides for the values set out in Schedule Ba by 2030.

66 For the same reasons Objective 6-2 should read (additional text underlined):

Surface water quality is managed to ensure that:

- *i. Water quality is maintained or enhanced in water bodies at a level which supports the values of the water bodies <u>to the extent practicable (taking account of land use within contributing catchments)</u>*
- *ii. accelerated eutrophication or sedimentation of lakes in the Region is prevented or minimised*
- *iii. the special values of rivers protected by Water Conservation Orders are maintained*

Policies of Chapter 6

67 The policies of Chapter 6 suffer from the same lack of flexibility and over-promise as the objectives do. Indeed, Policy 6-1 is more ambitious (and therefore inconsistent with the objective) because it infers that water quality values and standards are to be provided for

by the plan and in the life of the plan. Clearly that is not the case. Water quality values and standards will be an important *input and guide* to water management but they ought not to be given status through policy of an immutable and immediate bottom line.

68 For those reasons I consider that Policy 6-1 should include the qualifier "where practicable" in item (ii) and item (iii) in relation to the provision for values and standards. (I provide revised policies as **Attachment 1**).

69 Policies 6-3, 6-4 and 6-5 similarly promise something that may not be able to be delivered. Chapter 13 establishes a management approach that will deliver reductions in N-loss from existing farms and lower levels of N-loss than might otherwise be the case from new conversions. However, it is not clear that this will necessarily lead to an overall reduction in N-loss at a catchment scale and therefore some water quality standards may not be improved – certainly in the short to medium term. Having these policies in place means that any applications for land use consent may be too harshly judged even though their per hectare N-loss is modest. In particular, existing farms that are unable to reduce N-loss by the required 1% per year and fall to be considered as discretionary consents would fall to be judged against the very high hurdle erected by these policies. This places such farms at a high and unreasonable level of uncertainty.

70 My solution to this problem is that policies 6-3, 6-4, and 6-5 all become subject to a new and additional policy that I have numbered Policy 6-5a. This policy would read as follows:

> ***Policy 6-5a Water quality standards and intensive agricultural land use activities***
>
> *Regardless of whether the existing water quality meets or does not meet the relevant water quality standard within a water quality management zone*, as shown in Schedule D, (or whether there is sufficient data to enable a comparison of the existing water quality with the relevant water quality standard), intensive farming land use activities in catchments with a high N-loss contribution from such activities shall be managed in a manner that maximizes intensive agriculture's contribution to maintaining or improving water quality through the promotion of progressive improvement in individual farm discharges (including non point source discharges) in a way and at a rate that reflects:*
>
> *i. The opportunities and limitations of best land management practices*
> *ii. The availability, adoption and viability of on-farm water quality management technology*
> *iii. The economic and social benefits of maintaining viability and productivity of farming enterprises*

71 Policies 6-2, 6-3 and 6-4 should all be prefaced by the words *"Except as provided by Policy 6-5a…"*

72 Policy 6-6 should also, in my opinion, be similarly amended so that is is less absolute and more able to accommodate the reality of water quality pressures.

Policy 6-7

73 Policy 6-7 addresses land use activities that affect water quality. I consider that two important changes should be made to this policy. First, consistent with the recommendations I make in regard to Rule 13-1 (see paragraph 91), Policy 6-7 needs to be amended to make clear that not all intensive farms in targeted Water Management Sub-zones will need a nutrient management plan and that for modest N-loss farms a nutrient budget will be sufficient. Further, the suggestion that nutrient management plans ought to *"establish the measures required to achieve the target contaminant loads"* needs to be reconsidered. Nutrient budgets will not establish such measures (but will rather confirm that existing measures are adequate). Nutrient management plans, where they are required, ought not be charged with this objective but rather the more realistic task of establishing measures required to achieve *progress towards* the target contaminant loading rates given that (i) individual plans cannot achieve a receiving water loading rate that is determined by multiple farms in a catchment; and (ii) the target loading rates are only feasible over the long term and it would be wrong to infer that Year 1 nutrient management plans will deliver (even collectively) those long term outcomes.

74 The second significant problem with Policy 6-7 is that the the faecal contamination component is simply wrong. The reality is that the risk of faecal contamination from land use activities is managed by the POP through (a) permitted activity conditions (addressing stock feed and feed pads, offal holes, dumps and biosolids application) (b) consent obligations for effluent management. All these regulatory means apply across the Region (not just in targeted Water Management Sub-zones as implied). Similarly, stock access to waterbodies is managed across the Region through the Clean Streams Accord. This mechanism should be recognised.

75 In summary, consistent with my proposal for the redesign of Rule 31-1, I propose that Policy 6-7 as it relates to faecal contamination, be decoupled from the controlled activity/FARM strategy tool. Even under POP as proposed, that tool only represented one strand of the regional approach to managing the risk of faecal contamination of water bodies. With my proposal to confine the controlled activity/FARM strategy to a narrower range of farms, Policy 6-7 would be even more misrepresentative of the actual approach as contained in Chapter 13.

76 My proposed redraft of Policy 6-7 is set out in full in **Attachment 1**

Method 6.5/6.7: Water Quality

77 Method 6.5 (proposed to be renumbered 6.7 by the officers' report) already commits Horizons (along with Dairy NZ and Fonterra) to work with landowners to protect and enhance water quality. This method focusses on the provision of advice and financial/project management assistance.

78 In my opinion Method 6.7 (as renumbered) should be modified to include:

78.1 A statement to the effect that it will be the principal tool to address N-loss from existing farms for the first five years from the date the plan becomes operative.

78.2 A commitment to measure the effectiveness of the method at year five (consistent with obligations to monitor and report under section 35(2)(b) and (2A) of the RMA)

78.3 A good faith commitment to initiate a plan change to remove the application of Rule 13-1 to farming types that can demonstrate progress (consistent with obligations to *"take appropriate action"* under section 35(2) of the RMA).

79 My proposed redraft of Method 6.7 is set out in full in **Attachment 1**

Policies of Chapter 13

80 Policy 13.1 refers to having particular regard to the objectives and policies of Chapter 6 regarding the values of water bodies. I consider that having regard to those values (but not being dictated by them) is appropriate.

81 However, I do consider that the policy framework on Chapter 13 is remiss in two important ways:

- First, there is no guidance given on the standard of performance expected from intensive land use (including dairying) that cannot meet the N-loss values of Table 13.2. Consequently there is considerable uncertainty about the practices and measures that might be required of such farms through the consenting process and the impact these might have on the very viability of (particularly existing) farming operations.

- Second, the ability to trade surplus N is apparently anticipated by the provisions of Chapter 13 but it is not anywhere made explicit. I support the concept of trading as a way of meeting environmental objectives at reduced cost and consider that a policy on trading should be incorporated within Chapter 13. If it

is not it is doubtful that full advantage will be taken of this important element of the proposed regime.

82 To resolve the first of these issues I propose that a further policy be added as Policy 13-2a to read as follows:

13-2a Management of nitrogen leaching associated with intensive farming land use activities

When making decisions on resource consent applications, and setting conditions, on land use relating to the rate of Nitrogen leaching, the Regional Council will seek to limit leaching equivalent to the rates achievable using best management practice for the particular farm or require the applicant to avoid Nitrogen leaching in accordance with Policy 13-2b while:

a. *retaining stocking rates at levels similar to those occurring on the farm prior to the obligation to gain land use consent under this plan; and/or*

b. *ensuring the conditions imposed do not render commercially unviable any farming operation that existed prior to the obligation to gain land use consent under this plan.*

83 This (or similar) policy is designed to ensure that the applicant can meet their obligations to maintain or reduce N-loss at least cost and/or at a cost that allows for an existing operation to continue. I believe this is consistent with Part 2 of the RMA.

84 In addition, to resolve the second of the issues outlined above, I propose that a policy explicitly providing for trading be included as Policy 13-2b to read as follows:

13-2b Transfer of N-loss entitlement

When (a) making decisions on resource consent applications, and setting conditions, on land use relating to the rate of Nitrogen leaching to be allowed from a property; or (b) determining whether the conditions of a permitted activity are being, or can be, met for a particular property, the Regional Council shall take into account Nitrogen leaching avoided from any other rural property in the region provided:

a. *The property on which Nitrogen leaching is to be avoided is within the same Water Management Sub-zone as the property in respect of which consent or compliance is being considered*

b. *The property on which the Nitrogen leaching is to be avoided is subject to a FARM Strategy and the volume/rate of the Nitrogen leaching avoided and the duration of that avoidance is recorded*

in a resource consent or other legally enforceable agreement with the Regional Council

c. *The calculation of Nitrogen leaching avoided is based on the difference between the modelled rate of leaching (determined using the methodology of the FARM strategy workbook) and the applicable A value from Table 13.2*

d. *The Nitrogen leaching avoided is not being relied on by any other party for the purpose of compliance with permitted activity conditions or conditions of any resource consent.*

85 This policy is critical to ensuring that N-loss can be achieved at least cost. It is intended to apply so that traded N-loss entitlement may be used to confirm compliance with either permitted activity conditions or controlled or restricted discretionary activity standards and terms.

Table 13.1

86 Table 13.1 sets out the targeted Water Management Subzones and the dates at which Rule 13-1 applies. I consider that this approach is appropriate, but for the reasons set out earlier I consider that all dates should be set back so that the first date of obligation is five years from the time the Rule 13-1 becomes operative. I consider five years to be an appropriate period to transition into the new regulatory regime because:

86.1 It will take at least five years for the industry (in conjunction with the Horizons) to develop, fund and roll out an awareness raising and support programme to assist the transition, and then review whether Rule 13-1 is in fact required (in accordance with Method 6.7 (as renumbered));

86.2 Any longer than five years and it would be difficult to bring the dates of obligation for the last Water Management Sub-zones within the nominal ten year life of the plan (given the need to phase-in obligations to acknowledge capacity constraints);and

86.3 A five year timeframe is consistent with the Primary Sector Water Partnership timeframe (see evidence of Mr Newland).

87 My proposed Table 13.1 is included as **Attachment 3**.

Table 13.2

88 A revised Table 13.2 is also proposed (**Attachment 4**). Consistent with the preceding discussion of the difficulties I see with the POP's approach, my revised Table 13.2 differs from the POP's version in two important ways.

89 First, the table I propose has two sets of values for each LUC. "A" values are numerical standards just as proposed by POP (in Year 1 they are similar to those proposed by POP – with some adjustment to Classes III to VI as discussed in the evidence of Mr Smeaton). "B" values represent an alternative "route". In Year 1 "B" values are the equivalent of the average annual kg/ha/year N-loss from the subject property over the 2006-2009 period. They are, in other words, a grandparented entitlement.

90 The second difference is that adjustments have been made to Year 5 and Year 10 "A" values to slow the Rate of the Sinking Lid to the equivalent of 1% per year for 10 years (compared to between 1.3% and 2.4 % per year as proposed by POP). "B" values are also scheduled to decline by 4% by Year 5 and 10% in Year 10.

Rule 13-1

91 The creation of two sets of N-loss values is important for the design of Rule 13-1. My proposed amendment to Rule 13-1 (see **Attachment 5**[14]) has a number of elements. Most significantly, it makes *existing* farms that can meet "A" values (for Classes I and II the same values proposed under POP[15]) at Year 1 *permitted activities*. Under this rule such farms will remain permitted until such time as they fail to meet any "A" value in accordance in Table 13.2.

92 A condition of such permitted activities is that there is a valid and professionally developed nutrient budget in place that shows N-loss below the rates for whole of farm loss calculated using the "A" values in Table 13.2.

93 The advantages of this aspect of Rule 13-1 as revised are many. They include:

- The ability to achieve permitted status acts as an incentive to act early so as to comply at Year 1 and avoid consent and FARM strategy obligations (which will generally not be welcomed by the farming sector). This means that Horizons is likely to see on-farm improvements before the date of obligation. The rule proposed in POP is much more likely to see business as usual until such time as change is required via a FARM strategy;

- There will be far fewer consents required (perhaps only half as many as under the POP as proposed), meaning savings for farmers and less administrative burden on Horizons;

[14] See also Attachment 9 for an definition of *nutrient budget*

[15] According to the evidence of Dr Royguard (see Table 8 of that evidence), 41% of the Region's dairying is on Class I or II land

- It does not unnecessarily control (and impose cost on) good performers, meaning goodwill will more likely be sustained with a large section of farming community;

- The approach is much lower cost for up to 50% of farmers. All Fonterra farmers produce nutrient budgets already, so that the marginal cost for most will be minimal (relative to producing a FARM strategy).

94 Any cost disadvantage compared to POP is hard to imagine. There is low risk of poorer environmental performance since compliance monitoring and enforcement is dependent on Horizons' compliance monitoring effort equally for both approaches. The compliance test is simple and non discretionary. Where there is no nutrient budget, or the nutrient budget shows N-loss levels above the rate allowed (calculated according to the "A" values in Table 13.2), the intensive farming operation is not permitted and consent can be required.

Rule 13-1a

95 The other key dimension of my proposed revision of Rule 13-1 is that farms that cannot meet the permitted activity conditions – and any new conversion - would be *controlled activities* and subject to a FARM strategy in precisely the same way as proposed under POP[16]. To accommodate this proposal I have relabelled the controlled activity rule as Rule 13-1a.

96 The key difference is that farms coming within Rule 13-1a are, by definition, farms that cannot meet the Year 1 "A" values. That being the case, it would be rather pointless to require them to meet those values at Year 1 as a controlled activity. That is the purpose of "B" values. Farms that fall to be dealt with as controlled activities begin their transition with an N-loss entitlement based on their average N-loss over the previous three years. In this way those who cannot comply are eased into a regime that ensures N-loss reductions over time.

97 The advantages of this change are that:

- It recognises different starting positions of farmers (including in particular high costs associated with certain physical conditions - land with lower natural capital and/or high rainfall) and therefore the variable costs of compliance with the "A" values of Table 13.2;

- It lowers the economic cost, especially where compliance with Table 13.2 "A" Values can only be achieved by reducing production;

[16] Except that the FARM Strategy would be narrowed in scope for the reasons given in paragraph 103 to be akin to a nutrient management plan.

- It provides increased certainty for landowners that they will not be put "out of business" upon the introduction of POP's N-loss management regime.

98 The cost of the approach is that N-loss will continue from some existing farms at somewhat higher levels than would be the case under the POP's version of Rule 13-1. However, it must be remembered that many farms would not have achieved the relatively low rates of N-loss specified in Table 13.2 anyway, and would have needed consents to continue to operate above those rates. Physical characteristics (land quality and rainfall) mean that capping the existing rate of N-loss and making improvements over time is the only realistic strategy if those farms are to continue at or near current levels of production. Acknowledging and providing for that reality is, in my opinion, an appropriate response in terms of the overall judgement required by Part 2 of the Act.

99 It is important to note that Table 13.2 contained in **Attachment 4** of this evidence does promote the reduction of both "A" and "B" N-loss values over time. However it should also be pointed out that the farms operating on the basis of B values will become an increasingly smaller proportion of the total (and may even drop in number in absolute terms) as the dairy industry continues to grow and change (remembering that new conversions will need to meet "A" N-loss values). The appropriateness of the Year 20 N-loss values will, of course, need to be reconsidered at the time of the first review of the POP (presumably after Year 10) in light of technological developments and management options that exist at that time.

Rule 13-27a

100 The Chapter 13 of POP is currently unclear on the status of land uses that cannot meet the standards and terms (including the Table 13.2 values) for controlled activities. However, it appears that these are discretionary activities under Rule 13-27 (notwithstanding that that rule relates to discharges and not land use). Little indication is provided by Rule 13-27 as to how these consents will be dealt with.

101 To remove uncertainty, both as to status and in regard the standards and terms that would apply, I propose an additional Rule 13-27a (see **Attachment 5**).

102 Rule 13-27a would make dairy farming (and other intensive land use) a *restricted discretionary activity* where it cannot meet the conditions of a permitted activity or the standards and terms of a controlled activity. I consider that category to be appropriate as the matters at issue are narrow in scope. Activities falling within this category should, in my view, be required to operate according to a FARM Strategy as controlled activities must do. I further consider

that the plan should explicitly state that any such application will not be notified. This reflects the novel and highly technical nature of the regulatory regime and the fact that any such consent in this category will likely be in respect of existing farms.

A single issue framework

103 The other significant change proposed by the redraft of Rule 13-1 is that it focuses solely on land use and its impacts on N-loss. For the reasons discussed in paragraph 56, matters such as water takes, the discharge of biosolids, and discharges from offal holes, feed pads and farms dumps should, in my opinion, be regulated under the POP's Rules 13-2 to 13-7 with necessary amendment. Those rules and the amendments proposed to ensure they apply to dairy farming and other intensive land uses in *all* Water Management Subzones are set out as **Attachment 6**. This will also require changes to be made to the scope of the FARM Strategy Workbook.

PROVISIONS IN RELATION TO WATER QUANTITY

104 The POP's approach to water quantity (so far as it affects dairy farming) is to limit permitted surface water takes to a maximum of $30m^3$ per day. This volume relates to domestic needs, stock drinking water and dairy shed needs (udder cleaning, wash down, and milk cooling). Surface water takes within core allocations are controlled activities. Surface water takes beyond core allocations are non-complying activities. Groundwater may be taken in addition to surface takes. Permitted groundwater takes are limited to $50m^3$ per day. Beyond that, groundwater takes are discretionary activities.

105 There are two major issues with this regime proposed under the POP. First, the POP erroneously attempts to control the volume of stockwater takes when these takes are provided for under section 14(3)(b) of the RMA and section 30(4)(f) expressly restricts Horizons from preparing rules that affect activities authorised by section 14(3)(b).

106 The Act makes clear that stock drinking water may only be limited when, and to the extent that, such takes have, or are likely to have, an adverse effect on the environment. In practical terms how this is managed depends on the allocation status of the particular water body in question. For water bodies that are not seriously over allocated managing adverse effects of takes for stock drinking water may not be an issue or an infrequent seasonal issue only, able to be managed through water shortage provisions (including water shortage directions of section 329 of the Act). For water bodies that are over allocated (to the point where any additional regular take will necessarily have an adverse effect) some limit on stock drinking

water takes through plan mechanisms may be necessary and appropriate[17].

107 There is no such level of sophistication in the POP's water take policies or rules. Rather, a blunt $30m^3$ take limit per property applies. Clearly this is not related to whether the stock drinking water take has, or is likely to have, an adverse effect.

108 In my opinion the POP needs:

(a) To acknowledge that section 14(3)(b) takes are allowed under the Act (irrespective of, and outside of, the permitted take framework); and

(b) To state what and how the "adverse effects test" will apply to section 14(3)(b) takes.

109 This leads on to the second issue; the way that Rule 15-1 allocates rights. In short, the "uniform volume per property" approach is too crude and, because it fails to take into account the needs of property occupiers (which vary by property size and land use), leads to a misallocation of water. In my opinion, the volume of permitted surface water take should broadly correspond with the likely foreseeable needs of properties (to the extent that surface water availability allows).

110 The third issue relates to the preference given to hydro generation. This preference is derived from Policy 6-16 (b) which (in the form proposed) states *"the minimum flows and core allocations set out in Schedule B shall be assessed after any takes for hydroelectricty generation have been taken".*

111 In my view this provides a wholly inappropriate preferential entitlement to water for hydroelectricty generation. It implies that hydro takes can occur outside of the normal allocation framework and that a future hydro development would somehow cause minimum flows and core allocations to be reset.

112 As noted by Mr Newland, Horizons' officers have previously given Fonterra an assurance that this is intended to apply to existing hydro schemes only. Given the location of existing hydro schemes in relation to current and future dairy farms such an arrangement would constitute a reasonable planning outcome.

[17] In either instance, domestic and stock drinking water should be accorded the highest priority and be the last to be restricted. In fully allocated catchments water clawed back through consent renewals should be set aside for stock drinking water needs where projections show stock drinking water demand will grow.

113 I note with agreement the amendment to Policy 6-16 proposed by the officers' report which give effect to the undertaking previously given by Horizons' staff.

114 The final issue relates to the priorities that apply during times of low flow. Policy 6-19 appears to include dairy shed needs and the needs of perishable food processing within the category of essential takes, but this could be made clearer.

FONTERRA'S ALTERNATIVE WATER QUANTITY PROVISIONS

115 **Attachment 8** sets out a revised Rule 15-1 that excludes section 14(3)(b) takes (which are allowed under the Act)[18] and provides for permitted "minor takes" such that there is a clear relationship between property size and use and permitted take. Consequential amendments to policies 6-12 and 6-19 are also proposed. The main advantages of the revised rule is that it avoids unnecessary consents and better matches water provision to what is happening "on the ground".

116 Under this proposal all non dairy properties/uses would receive the same or less permitted allocation than under Rule 15-1 as proposed by POP. All dairy farms with less than 214 cows (some 230 Fonterra suppliers in the Region) would be entitled to *less* surface water than under the POP but still adequate water for their needs. The beneficiaries of my revised rule are dairy farmers with more than 214 cows but less than 428 cows (currently some 382 Fonterra suppliers in the Region), who would have continued access to sufficient surface water without the need for a consent.

117 As noted by Mr Newman, in 2010 the average herd size in the Region is projected to be 374 cows and by 2021 (i.e. the end of the planning period) between 482 and 521 cows. Taking account of the proposed upper cap of $30m^3$ per day, that means approximately 25% of existing Fonterra suppliers would need consent for water takes immediately the rule takes effect. By the end of the planning period that would rise to perhaps 35-40%. This contrasts with the POP proposal that would see 73% of Fonterra suppliers need consent immediately[19].

118 As discussed in the context of N-loss, the transition to a more regulated allocation regime needs to be carefully managed. In my opinion this means ensuring that consent obligations are triggered

[18] It should be noted that for dairy, the stock drinking water take is effectively limited by the allowable dairy shed take. Thus even without limiting the stock drinking water take Horizons can effectively control the stockwater take in an indirect way.

[19] These estimates assume that farmers do not have access to ground water or that, for practical and/or economic reasons, running two supply systems (operating two pumps etc) the decision is made to rely solely on surface water.

at a point well above the average current water users' take (provided water availability permits). As noted in paragraph 117 above, due to the industry trend towards larger herds, a greater proportion of farmers will come within the consentable regime over time. Importantly though, farmers will make their future decisions on herd size in full knowledge that consent will be required for water takes necessary to sustain those herd sizes.

119 I have been able to find little in the Officer reports regarding the rationale for the design of Rule 15-1. It appears, however, that the surface water permitted take regime proposed in POP is based on desire for equity (with all property owners given the same entitlement). It may also simply reiterate the historic approach of a uniform per property allocation as originally included in the General Authorisations under the *Water and Soil Conservation Act 1967* and continued through the Operative Land and Water and Orua Catchment Water Allocation Regional Plans. That approach seemed based on applying a fixed volume that was of such a scale that it was very unlikely to produce an adverse effect.

120 If that is the case I consider the rational to be flawed. Equity in the form proposed is not relevant since the permitted entitlement is not transferable (and therefore the allocation is worthless if it cannot be used on site). There is, on the other hand, a degree of fairness in an approach that acknowledges the need for water associated with legitimate land uses and seeks to make that water available where ever that use arises (to the extent possible given water availability). We also know that whether a take of 15 or 50 m^3 has an adverse effect depends on the flow level at the point of take[20].

121 In summary, I consider that inter-dependent activities (stock drinking water and dairy shed needs) should be provided for as permitted activities to the fullest extent possible given water availability[21]. The current allocation regime is not related to need nor is it related to environmental effect and is therefore inappropriate. I provide a revised Rule 15-1 as **Attachment 8**. I accept, however, that further work may be required to ensure that stock drinking water is appropriately managed. That is not something that I can do with the information available to me at this time but is something Horizons will need to consider in finalising the water take provisions.

[20] Along with other matters such as the rate of take

[21] I accept that irrigation requires an order of magnitude more water and should be subject to consent.

PART 2 RMA CONSIDERATIONS

122 The most relevant Part 2 matter in this consideration of Chapters 6, 13 and 15 of the POP is the extent to which they are consistent with section 5 of the RMA.

123 Section 5, of course, seeks to achieve environmental outcomes from the use of resources while enabling people to provide for their social, economic and cultural well-being.

124 From a planning practitioner's perspective, I consider that there is a need to look at Section 5 as encouraging those exercising functions and powers under the Act to look for ways (through, for example, innovative non regulatory methods, clever regulation or modulated rates of change) to secure the environmental outcomes demanded of today's society without sacrificing the ability to use the resources on which that society relies.

125 Certainly there will be instances when there may be a need for the economic imperative to yield to protect environmental outcomes (to maintain the so called "environmental bottom line") but in most instances there are multiple opportunities to ensure that both the environmental and the socio-economic values can be safeguarded.

126 It is my clear view that the management of N-loss from intensive farming in the Manawatu-Wanganui Region presents a situation where both the economic imperative and the environmental values can be protected through the POP. However it is my equally clear view that this is much more likely to result from the provisions put forward in this evidence. The reasons why I consider that to be true are found thoughout this evidence. They include:

a. The water quality within the Region is not on a downward trend so there is room for an adjustment phase that reduces the economic cost.

b. The growth in the dairy industry (one of the primary land use stressors) is not forecast to be strong.

c. The provisions in **Attachments 1 to 8**:

- Provide a planning framework that better reflects the state of scientific knowledge and retains flexibility for decision-making where that science is incomplete;

- Will minimise *compliance cost* for the dairy sector because they reduce the number of consents required and the need for additional FARM Strategies where these are unnecessary to achieve desired outcomes;

- Take better account of *uncertainty* about the number of farms that cannot comply with N-loss limits (and the degree of the non compliance) by providing an alternative, realistic transition for whatever number of farms cannot meet applicable N-loss values;

- Are much less likely to *deter investment* in the dairy industry because they provide more certainty;

- Provide for adjustment costs to be minimised by N trading;

- Provide a better match between water need and permitted take requirements (thus reducing consenting costs).

127 Section 6 and 7 matters are also relevant. In particular:

- Section 6(a) - preservation of the natural character of …wetlands, lakes and rivers;

- Section 6(c) – protection of …significant habitats of indigenous fauna;

- Section 6(e) – the relationship of Maori and their culture and traditions with …water;

- Section 7(c) - the maintenance and enhancement of amenity values;

- Section 7(d) - the intrinsic value of ecosystems;

- Section 7 (h) - the protection of the habitat of trout and salmon.

128 In my opinion these environmental values have been instrumental in Horizons' development of water quality values and standards. The proposals contained in **Attachments 1 to 8** will retain those values and standards. These would continue to guide long term decision-making. My proposals would achieve the promotion of water quality towards these values and standards albeit at a slightly slower rate than that propsoed by POP as notified.

129 Improvements towards those Section 6 and 7 matters will be delivered because:

129.1 All new conversions will need to be consented and FARM strategies in place (although this will come at a cost that can be factored into business decisions). This provides an opportunity to ensure best practice on new farms;

129.2 All existing farms will need to reduce their loss by 10% from their 2009 levels over a ten year period (unless they are already operating below targets);

129.3 Where existing farms cannot meet those reduction targets the consent process will enable Horizons to ensure that best practice is being applied (with safeguards to ensure a reasonable approach is taken, recognising people's livelihoods are at stake).

CONCLUSIONS

130 Horizons has developed a reasonable basis for managing N-loss in the Manawatu-Wanganui Region. However, changes need to be made to the POP to correct for misconceptions about the degree of risk faced and the extent to which the POP's provisions can, and will, deliver water quality outcomes. In particular there is an over-emphasis on regulatory/consenting processes that may prove to be counter-productive.

131 Subtle, but important, changes are required to the objectives and policies of Chapter 6 to acknowledge the role of water quality values and standards in setting a long term direction while not unrealistically constraining existing land uses.

132 Substantive additions are required to the policies of Chapter 13 to manage the risks of unacceptable costs asssociated with the proposed regulatory/consenting process on the dairy sector.

133 Substantive change needs to be made to Rule 13-1 to make the proposed regulation "smarter", more focused and less costly. In particular, there should be an opportunity for non regulatory methods to be implemented and a good faith commitment given that, if these methods prove effective, regulation will not apply as currently proposed.

134 Substantive change is required to Rule 15-1 to acknowledge that stock water takes are allowed under the Act (and can only be limited by a regional plan in specific circumstances) and to make provision for permitted takes in a way that better matches entitlement to potential need.

135 Should these changes be made, I consider that the POP would give effect to Part 2 of the RMA. If they are not, I would consider there to be serious risk that Part 2 will not be given effect to in an appropriate manner.

ATTACHMENT 1 – Objectives and policies of Chapter 6

Objective 6-1: Water management values

Surface waterbodies are managed in a manner which, to the extent practicable given land use within contributing catchments, safeguards their life-supporting capacity and recognises and provides for the values set out in Schedule Ba by 2030.

Objective 6-2: Water management values

Surface water quality is managed to ensure that:

i. Water quality is maintained or enhanced in water bodies at a level which supports the values of the water bodies to the extent practicable (taking account of land use within contributing catchments)
ii. accelerated eutrophication or sedimentation of lakes in the Region is prevented or minimised
iii. the special values of rivers protected by Water Conservation Orders are maintained

Policy 6-1: Water management framework

For the purpose of safeguarding the life-supporting capacity of water bodies^ and to avoid, remedy or mitigate adverse effects^ of activities on water^ quality, water^ quantity and the beds^ of rivers^ and lakes^, water bodies^ in the Manawatu- Wanganui Region shall be managed in accordance with the following framework:

(i) The Water Management Zones* and Water Management Sub-zones* and Groundwater Management Zones defined in Schedule Ba, Part Ba1 shall be used as the units for integrated management of water bodies^;

(ii) Water bodies^ shall be managed in a manner that recognises and provides, to the extent practicable, for the surface water^ management values defined in Schedule Ba, Part Ba2;

(iii) Surface water^ quality shall be managed, to the extent practicable, according to the standards set in Schedule D, which provide for the values defined for each Water Management Sub-zone*;

(iv) Surface water^ allocation shall be managed according to the minimum flows and allocation limits set in Schedule B, Table B1, for each Water Management Sub-zone* and groundwater shall be managed according to the allocation limits set in Schedule C for each Groundwater Management Zone.

Policy 6-3: Ongoing compliance where water quality standards are met

a. Except as provided in Policy 6-5a, ~~In each case~~ where the existing water quality meets the relevant water quality standard within a Water Management Sub-zone*, as shown in Schedule Ba, activities shall be managed in a manner which ensures that the water quality standard continues to be met.

b. For the avoidance of doubt, (a) applies:
   i. in circumstances where the existing water quality of a Water Management Sub-zone* meets all of the water quality standards for the Sub-zone (in which case (a) applies to every water quality standard for the Sub-zone);
   ii. in circumstances where the existing water quality of a water management zone* meets some of the water quality standards for the Sub-zone (in which case (a) applies only to those standards met).

Policy 6-4: Enhancement where water quality standards are not met

a. Except as provided in Policy 6-5a, ~~In each case~~ where the existing water quality does not meet the relevant water quality standard within a Water Management Sub-zone*, as shown in Schedule D, activities shall be managed in a manner which maintains or enhances existing water quality in order to meet the water quality standard for the Water Management Sub-zone* shown in Schedule D.

b. For the avoidance of doubt, (a) applies:
   i. in circumstances where the existing water quality of a Water Management Sub-zone* does not meet any of the water quality standards for the Sub-zone (in which case (a) applies to every water quality standard for the Sub-zone)
   ii. in circumstances where the existing water quality of a Water Management Sub-zone* does not meet all of the water quality standards for the Sub-zone (in which case (a) applies only to those standards not met).

Policy 6-5: Management of activities in areas where existing water quality is unknown

a. Except as provided in Policy 6-5a, ~~In each case~~ where there is insufficient data to enable a comparison of the existing water quality with the relevant water quality standard as shown in Schedule D, activities shall be managed in a manner which:
   i. maintains or enhances the existing water quality
   ii. has regard to the likely effect of the activity on the values identified for the relevant Water Management Sub-zone*
   iii. has regard to relevant information about the

existing water quality in upstream or downstream Water Management Sub-zones*, where such information exists.

b. For the avoidance of doubt, (a) applies:
   i. in circumstances where there is insufficient data to enable a comparison of the existing water quality with any of the water quality standards for a Water Management Sub-zone* (in which case (a) applies to every water quality standard for the Sub-zone)
   ii. in circumstances where there is insufficient data to enable a comparison of the existing water quality with all of the water quality standards for a water management Sub-zone* (in which case (a) applies only to those standards with insufficient data).

Policy 6-5a Water quality standards and intensive agricultural land use activities

Regardless of whether the existing water quality meets or does not meet the relevant water quality standard within a water quality management zone*, as shown in Schedule D, (or whether there is sufficient data to enable a comparison of the existing water quality with the relevant water quality standard), intensive farming land use activities in catchments with a high N-loss contribution from such activities shall be managed in a manner that maximizes intensive agriculture's contribution to maintaining or improving water quality through the promotion of progressive improvement in individual farm discharges (including non point source discharges) in a way and at a rate that reflects:

i. The opportunities and limitations of best land management practices
ii. The availability, adoption and viability of on-farm water quality management technology
iii. The economic and social benefits of maintaining viability and productivity of farming enterprises

Policy 6-6 Maintenance of groundwater quality

(a) *Discharges*^ and *land*-use activities shall be managed in a manner which, to the extent practicable, maintains groundwater quality to preserve its existing and future uses and values

(b) Groundwater takes in the vicinity of the coast shall be managed in a manner which avoids saltwater intrusion.

(c) On-site wastewater systems shall be designed to minimise potential adverse *effects*^ on the groundwater quality, particularly within areas with degraded groundwater quality.

Policy 6-7 Land use activities affecting surface water quality

(a) **Nutrients**

(i) New intensive farming land-use activities shall be regulated in targeted Water Management Sub-zones* and existing intensive farming in these zones such be similarly regulated unless non regulatory methods prove effective.

(ii) For the purposes of subsection (a)(i), targeted Water Management Sub-zones* shall be those zones where, collectively, intensive farming land-use activities are the predominant cause of elevated nutrient levels.

(iii) Those persons carrying out intensive farming land-use activities in the Water Management Sub-zones* targeted in subsection (a)(i) shall be required, amongst other things, to prepare a nutrient budget or nutrient management plan for the purposes of:

1. establishing the measures required to achieve progress towards the target contaminant loading rates for the relevant Water Management Sub-zones*, as specified in Schedule Ba
2. identifying best management practices
3. establishing programmes for implementing any required changes.

(b) **Faecal contamination**

(i) The risk of faecal contamination from intensive farming land-use activities shall be controlled across the Region through a combination of non regulatory and regulatory means that amongst other things.

~~(i) Intensive farming *land*^ use activities shall be regulated in targeted *Water Management Sub-zones**.~~

~~(ii) For the purposes of subsection (b)(i), *targeted Water Management Sub-zones** shall be those *Sub-* zones where, collectively, intensive farming land-use activities are causing elevated faecal contamination levels.~~

~~(iii) Those persons carrying out intensive farming land-use activities in the Water Management Sub-zones which are require consent to management nutrient loss risk * targeted in subsection (b)(i) shall be required, amongst~~

~~other things, to~~

1. prevent stock access to waterbodies
2. mitigate against faecal contamination from other entry points (eg., race run-off)
3. establish programmes for implementing any required changes.

(c) **Sediment**

(i) In those water management zones* where agricultural land-use activities are the predominant cause of elevated sediment levels, non-regulatory whole farm business plans* shall be prepared and implemented for the purpose of reducing soil erosion, as described in Chapter 5.

Method 6-7	**Water Quality Improvement**
Description	The Regional Council and other agencies will work with landowners to protect and enhance the *water*^ quality of the Region's *water bodies*^. Landowners in those *Water Management Sub-zones** where the nutrient management (non-point source discharge) control *rules*^ are to be introduced will receive the highest priority for assistance. This project represents an expansion of Horizons' existing *water*^ quality improvement programme, which focuses almost entirely on dairy farmers as part of the Dairying and Clean Streams Regional Action Plan for Manawatu-Wanganui Region. *Water body*^ owners will be provided with advice and financial/project management assistance to carry out enhancement and protection measures including fencing and planting of riparian margins. The Regional Council will seek funding from third parties to assist with this method. The effectiveness of the protection and enhancement works and other management practice improvements will be monitored regularly and reported five years following this plan coming into effect in accordance with Regional Council's obligations under section 35 of the RMA.
Who	Regional Council, Dairy NZ, Fonterra and *Territorial Authorities*^ and funding agencies including the He Tini Awa Trust and Nga Whenua Rahui.
Links to Policy	This method links to Policies 6-2, 6-4 and 6-7 and Policies 13-1 to 13-2b
Targets	1. The targets of the Dairying and Clean Streams Regional Action Plan for Manawatu-Wanganui Region are achieved by the due dates. 2. Advice and assistance is offered to all landowners affected by the nutrient management (non-point source discharge) control *rules*^ 3. All landowner requests for advice and assistance regarding *water*^ quality improvement are responded to promptly 4. Modelled N-loss per hectare from existing farms is in targeted Water Management Sub-zones, on average, improved at the Water Management Sub-zone scale after five years.

Contingent action	1. The Regional Council will initiate a plan change to remove the application of Rule 13-1 to existing farms where, the Year 5 monitoring report demonstrates that the relevant joint Regional Council/third party non regulatory method meets the targets described above. 2. Where the meeting of targets cannot be demonstrated in accordance with 1 above, the Regional Council will review the appropriateness of Rule 13-1 (including Tables 13.1 and 13.2) based on improved information that will be available at that time, before that Rule takes effect in any Water Management Sub-zone. If, as a result of that review, it is apparent that changes to Rule 13-1 (including Tables 13.1. and 13.2) are necessary to give effect to Part 2 of the RMA the Regional Council will initiate a plan change accordingly.

ATTACHMENT 2 – Policies of 13-1 to 13-2b, Chapter 13

Policy 13-1: Consent decision-making for discharges^ to water^

When making decisions on resource consent^ applications, and setting consent^ conditions^, for discharges^ of water^ or contaminants^ into water^, the Regional Council will have particular regard to:

(a) the objectives and policies of Chapter 6 regarding the values of water_bodies^ and the management of surface water^ quality and discharges^

(b) avoiding discharges^ which contain any persistent^ contaminants^ that are likely to accumulate in a water_body^

(c) the appropriateness of adopting the best practicable option^ to prevent or minimise adverse effects^ in circumstances where:

(i) it is difficult to establish discharge^ standards for a particular discharge^ that recognise and provide for the management approaches for water^ quality and discharges^ set out in Chapter 6, and
(ii) the likely adverse effects^ are minor, and the costs associated with adopting the best practicable option^ are small in comparison to the costs of investigating the likely effects^ on land^ and water^

(d) the objectives and policies of Chapters 3, 4, 7, 9, and 10 and 11 to the extent that they are relevant to the discharge^.

Policy 13-2: Consent decision-making for discharges^ to land^

When making decisions on resource consent^ applications, and setting consent conditions^, for discharges^ of contaminants^ onto or into land^the Regional Council will have particular regard to:

(a) the objectives and policies of Chapter 6 regarding the management of groundwater quality and discharges^

(b) where the discharge^ may enter water^ or have an adverse effect^ on water^ quality, the degree of compliance with the approach for managing surface water^ quality set out in Chapter 6

(c) avoiding as far as practicable any adverse effects^ on any sensitive receiving environment^ or potentially incompatible land^ uses, in particular any houses, schools, churches, marae, public areas, regionally significant infrastructure identified in

Policy 3-1, wetlands^, surface water bodies^, and the Coastal Marine Area^;

(d) the appropriateness of adopting the best practicable option^ to prevent or minimise adverse effects^ in circumstances where:

(i) it is difficult to establish discharge^ standards for a particular discharge^ that recognise and provide for the management approaches for water^ quality and discharges^ set out in Chapter 6
(ii) the likely adverse effects^ are minor, and the costs associated with adopting the best practicable option^ are small in comparison to the costs of investigating the likely effects^ on land^ and water^

(e) avoiding discharges^ which contain any persistent contaminants^ that are likely to accumulate in the soil or groundwater

(f) the objectives and policies of Chapters 3, 4, 5, 7, 9 2,10 and 11 to the extent that they are relevant to the discharge^.

Policy 13-2a: Management of nitrogen leaching associated with intensive farming land use activities

When making decisions on resource consent^ applications, and setting conditions, on land use relating to the rate of Nitrogen leaching, the Regional Council will seek to limit leaching rates equivalent to the rates achievable using best management practice for the particular farm or require the applicant to avoid Nitrogen leaching in accordance with Policy 13-2b while:

a. Retaining stocking rates at levels similar to those occurring on the farm prior to the obligation to gain land use consent under this plan; and/or

b. Ensuring the conditions imposed do not render commercially unviable any farming operation that existed prior to the obligation to gain land use consent under this plan.

Policy 13-2b Transfer of N-loss entitlement

When (a) making decisions on resource consent applications, and setting conditions, on land use relating to the rate of Nitrogen leaching to be allowed from a property; or (b) determining whether the conditions of a permitted activity are being, or can be, met for a particular property, the Regional Council shall take into account Nitrogen leaching avoided from any other rural property in the region provided:

a. The property on which Nitrogen leaching is to be avoided is within the same water management zone as the property in respect of which consent is being considered;

b. The property on which the Nitrogen leaching is to be avoided is subject to a FARM Strategy and the volume/rate of the Nitrogen leaching avoided and the duration of that avoidance is recorded in a resource consent or other legally enforceable agreement with the Regional Council;

c. the calculation of Nitrogen leaching avoided is based on the difference between the modelled rate of leaching (determined using the methodology of the FARM strategy workbook) and the applicable A value from Table 13.2;

d. the Nitrogen leaching avoided is not being relied on by any other party for the purpose of compliance with permitted activity conditions or conditions of any resource consent.

ATTACHMENT 3 – Table 13.1 *Water Management Sub-zones*

Catchment	Water Management Zone	Date the rules of the Plan come into force
Mangapapa	Mana_9b	~~1 April 2011~~ Five years after the date at which Table 1 becomes operative
~~Mowhanau~~	~~West_3~~	~~1 April 2009~~
Mangatainoka	Mana_8a Mana_8b Mana_8c Mana_8d Mana_8e	1 April ~~2011~~ Five years after the date at which Table 1 becomes operative
Upper Manawatu above Hopelands	Mana_1a Mana_1b Mana_1c Mana_2a Mana_2b Mana_3 Mana_4 Mana_5a Mana_5b Mana_5c	1 April ~~2012~~ Six years after the date at which Table 1 becomes operative

	Mana_5d Mana_5e	
Lake Horowhenua	Hoki_1a Hoki_1b	~~1 April 2012~~ Six years after the date at which Table 1 becomes operative
Waikawa	West_9a West_9b	~~1 April 2012~~ Six years after the date at which Table 1 becomes operative
Manawatu above gorge	Mana_6 Mana_9a Mana_9c	~~1 April 2013~~ Seven years after the date at which Table 1 becomes operative
Other south-west catchments (Waitarere and Papaitonga)	West_7 West_8	~~1 April 2013~~ Seven years after the date at which Table 1 becomes operative
Other coastal lakes	West_4 West_5 West_6	~~1 April 2013~~ Seven years after the date at which Table 1 becomes operative
Coastal Rangitikei	Rang_4a Rang_4b Rang_4c Rang_4d	~~1 April 2014~~ Eight years after the date at which Table 1 becomes operative
Mangawhero/Makotuku	Whau_3b Whau_3c Whau_3d	~~1 April 2015~~ Nine years after the date at which Table 1 becomes operative

Maps of the Water Management Zones* and Water Management Sub-zones* are contained in Schedule Ba

ATTACHMENT 4 – Table 13.2

Table 13.2 *Land Use Capability Classes (LUC)* Nitrogen Leaching/Run-off Values*

		LUC I	LUC II	LUC III	LUC IV	LUC V	LUC VI	LUC VII	LUC VIII
Year 1 (when rule comes into force) (kg of N/ ha/year)	Value A	32	29	~~22~~ 25	~~16~~ 19	~~13~~ 18	~~10~~ 16	6	2
	Value B	n							
Year 5 (kg of N/ ha/year)	Value A	~~27~~ 30	~~25~~ 28	~~21~~ 24	~~16~~ 18	~~13~~ 17	~~10~~ 15	6	2
	Value B	n x 0.96							
Year 10 (kg of N/ ha/year)	Value A	~~26~~ 28	~~22~~ 26	~~19~~ 22	~~14~~ 17	~~13~~ 16	~~10~~ 14	6	2
	Value B	n x 0.9							
Year 20 (kg of N/ ha/year)	Value A	25	21	18	13	12	10	6	2
	Value B	25	21	18	13	12	10	6	2

Where n = the average kg of N lost ha/year on the subject property over the period 1 January 2006 to 31 December 2009

ATTACHMENT 5 – Rules 13-1, 13-1b and 13.27b

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
13-1 **Dairy farming*, cropping, market gardening* and intensive sheep and beef farming*, and associated activities**	Any use of land in the Water Management Sub- zones* specified in Table 13.1 that existed as at 1 January 2010.	Permitted	(a) As at the Year 1 date specified in Table 13.1, there is a nutrient budget* for the property on which the land use is occurring that: (i) Is based on the land management practices occurring on that property; and (ii) demonstrates that nitrogen leaching from that property is occurring at a rate no greater than the Value A rate for the relevant Water Management Sub-zone* specified in Table 13.2 . When calculating the maximum nitrogen leaching/run-off values allowed for the whole farm for the purpose of (a) (ii) the value A rates for each land use capability class (LUC)* in Table 13.2 shall be used and the nitrogen leaching rate determined in accordance with the FARM Strategy Workbook (Horizons Regional Council, [as updated]).	

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
13-1a **Dairy farming*, cropping, market gardening* and intensive sheep and beef farming*, and associated activities that cannot meet the conditions for a permitted activity**	From the dates specified in Table 13.1, the **existing** use of land^ in the Water Management Sub-zones specified in Table 13.1 which cannot meet the conditions for a permitted activity and from the date this rule becomes operative, any wholly **new** use of land^, including conversion, in **all** water management zones* in the Region for: (a) dairy farming* (b) cropping* (c) commercial vegetable growing (and market gardening)* (d) intensive sheep and beef farming* including any activity not otherwise permitted by rules 13.2 to 13.7 of the following activities associated with the	Controlled	(a) The use or activity is undertaken in accordance with a Farmer-Applied Resource Management Strategy (FARM Strategy). (b) The FARM Strategy referred to in (a) shall be prepared to meet the requirements set out in The FARM Strategy Workbook (Horizons Regional Council, [as updated]). (c) The FARM Strategy referred to in (a) shall be submitted to the council as part of the resource consent application required by this rule. When calculating the maximum nitrogen leaching/run-off values allowed for the whole farm in accordance with preparing a FARM Strategy as required by (b): ▪ the Value B leaching rate in Table 13.2 shall apply to all **existing** farms ▪ the Value A leaching rate within each land use capability class (LUC) shall apply to any **new** use of land. ~~If the activity involves the taking of more than 30 m³ per day of surface water:~~ ~~(d) The taking and use of any surface water shall not be from~~	Control is reserved over: (a) the method of calculating the loss of nitrogen and phosphorus from a farm (b) the level of compliance with The FARM Strategy Workbook (Horizons Regional Council, April 2007) (c) effects on rare habitats*, threatened habitats* and at-risk habitats* (d) the preparation and implementation of a FARM Strategy for the purposes of meeting the requirements of this rule and the conditions of consent ~~(e) the method, location, volume and rate of water takes~~

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	above uses: ~~i. the taking and use of surface water~~ ~~ii. the taking and use of not more than 50 m^3/day/property* of groundwater~~ ~~iii. the discharge of fertiliser* onto land and any consequential discharge of contaminants to air~~ ~~iv. the discharge of contaminants onto land from~~ ~~a. the preparation, storage, use or transportation of stock feed on production land, or~~ ~~b. the use of a feed pad and any consequential discharge of contaminants to air~~ ~~v. the discharge of grade A biosolids* and soil conditioners* onto or into production land, and any consequential discharge of contaminants to air~~ ~~vi. the discharge of contaminants~~		~~rivers protected under Rule 15.7~~ ~~(e) Water shall only be taken when the river is at or above its minimum flow, as assessed in accordance with Schedule B~~ ~~(f) The amount of water taken, when assessed in combination with all other water takes within the same water management zone, shall not exceed the relevant core allocation set out for that water management zone in Schedule B~~ ~~(g) The amount of water taken, when assessed in combination with all other water takes within the same catchment, shall not exceed the cumulative allocation for each water management zone in the same catchment.~~	(f) the review period of the FARM Strategy (g) the provision of information to the regional council to demonstrate compliance with this rule (h) duration of consent (i) review of consent conditions^ (j) compliance monitoring. (k) the effect^ of odour, dust, waste* or fertiliser* drift or spray drift. Resource consent^ applications under this rule will not be notified and written approval of affected persons will not be required (notice of applications need not be served on affected persons).

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	~~onto or into production land associated with an offal hole or farm dump, and any consequential discharge of contaminants into air~~ ~~vii. any discharge of contaminants to land or water from farm animals associated with the land use~~ ~~a. effluent from dairy sheds and ancillary feed pads~~ ~~b. effluent from existing piggeries~~ ~~c. sludge from farm effluent ponds~~ ~~d. poultry farm litter and effluent and any consequential discharge of~~ ~~e. contaminants into air.~~			

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
13-27b **Dairy farming*, cropping, market gardening* and intensive sheep and beef farming*, and associated activities not covered by Rules 13-1 or 13-1a**	The existing use of land (and associated activities) as specified in Rule 13-1a that cannot meet the Value B rates of Table 13.2, and any wholly new use of land (and associated activities) as specified in Rule 13-1a that cannot meet the Value A rates of Table 13.2	Restricted Discretionary	(a) The use or activity is undertaken in accordance with a Farmer-Applied Resource Management Strategy (FARM Strategy). (b) The FARM Strategy referred to in (a) shall be prepared to meet the requirements set out in The FARM Strategy Workbook (Horizons Regional Council, [as updated]). (c) The FARM Strategy referred to in (a) shall be submitted to the council as part of the resource consent application required by this rule.	Discretion is restricted to: (a) the method of calculating the loss of nitrogen and phosphorus from a farm (b) the level of compliance with The FARM Strategy Workbook (Horizons Regional Council, April 2007) (c) effects on rare habitats*, threatened habitats* and at-risk habitats* (d) the preparation and implementation of a FARM Strategy for the purposes of meeting the requirements of this rule and the conditions of consent (e) the review period of the FARM Strategy

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
				(f) the provision of information to the regional council to demonstrate compliance with this rule (g) duration of consent (h) review of consent conditions^ (i) compliance monitoring. (k) the effect^ of odour, dust, waste* or fertiliser* drift or spray drift. Resource consent^ applications under this rule will not be notified and written approval of affected persons will not be required (notice of applications need not be served on affected persons).

ATTACHMENT 6 – Other permitted activity rules of Chapter 13

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
13-2 **Fertiliser**	The discharge of fertiliser* onto land and any consequential discharge of contaminants into air, except where the discharge is undertaken in association with a use of land controlled by Rule 13-1a.	**Permitted**	(a) There shall be no direct discharge of fertiliser* into any waterbody including groundwater. (b) There shall be no discharge into any rare or threatened habitat* or at-risk habitat*, except for the purpose of enhancing such habitats. (c) The fertiliser shall be applied in accordance with the Code of Practice for Nutrient Management (New Zealand Fertilisers Manufacturers Research Association, 2002), except where the fertiliser is being applied for domestic purposes meaning the garden associated with the household. (d) Where nitrogen fertiliser* is applied in excess of an application rate of 60kg N/ha/year onto land a nutrient budget, which takes into account all other sources of nitrogen and which is designed to minimise nitrogen leaching rates, shall be used to plan and carry out the fertiliser* application. (e) The discharge shall not result in any objectionable odour or fertiliser* drift to the extent that causes an adverse effect beyond the property* boundary.	

13-3 **Stock feed including feed pads**	The discharge of contaminants onto land from: (a) the preparation, storage, use or transportation of stock feed on production land, or (b) the use of a feed pad and any consequential discharge of contaminants into air, ~~except where the discharge is undertaken in association with a use of land controlled by Rule 13-1.~~	**Permitted**	(a) Farm silage storage pits with an area greater than 500 m^2, and feed pads, shall be sealed so as to restrict seepage of effluent. The permeability of the sealing layer shall not exceed $1x10^{-9}$ m/s. (b) All areas used for storing stock feed, for feed pads or for otherwise feeding stock (including feeding silage) shall be located and/or managed in a manner that ensures at all times when such areas are in use: (i) run-off from the area into surface water is prevented (ii) run-off from the surrounding catchment is prevented from entering the area. (c) All areas used for storing stock feed, for feed pads or for otherwise feeding stock (including feeding silage) shall comply with the following separation distances: (i) 50 m from rare habitats and threatened habitats* and at-risk habitats* (ii) 20 m from bores, surface waterbodies including drains and the Coastal Marine Area (iii) 50 m from any Historical Heritage as identified in any District or Regional plan schedule or database or proposed plan. (d) All effluent collected from feed pads shall be treated and discharged in accordance with Rule 13-6. ▪ The discharge shall not result in any objectionable odour, dust or spray drift beyond the property* boundary. (e) The *discharge*^ shall not result in any offensive or objectionable odour, dust or *spray drift** beyond the	

			*property** boundary.	
13-4 **Biosolids and soil conditioners**	The discharge of grade Aa biosolids* and soil conditioners* onto production land, and any consequential discharge of contaminants into air, ~~except where the discharge is undertaken in association with a use of land controlled by Rule 13-1.~~	**Permitted**	(a) There shall be no direct discharge into any waterbody. (b) There shall be no ponding of material on the soil surface for more than five hours following the application, or any run-off into a surface waterbody. (c) The material shall not contain any human or animal pathogens, or any hazardous substances. (d) The discharge shall comply with the following separation distances: (i) 150 m from residences, marae, schools, public buildings and public recreation areas (ii) 50 m from property* boundaries (iii) 50 m from rare habitats and threatened habitats* and at-risk habitats* (i) 20 m from bores, surface waterbodies including drains and the Coastal Marine Area (ii) 50 m from any Historical Heritage as identified in any District or Regional plan schedule or database or proposed plan. (e) A nutrient budget, which takes into account all other sources of nitrogen and which is designed to minimise nitrogen leaching rates, shall be used to plan and carry out the grade Aa biosolids* or soil conditioner* application. (f) The discharge shall not result in any objectionable odour, dust or spray drift or any spray drift beyond the property* boundary. (g) The discharger shall keep the following records: (i) a daily record of the discharge volume and location (ii) a monthly (or more frequent) analysis of the nitrogen	

			concentration of a discharge sample and make these records available to the Regional Council upon request.	
13-5 **Offal holes and farm dumps**	The discharge of contaminants onto or into production land associated with an offal hole or farm dump, and any consequential discharge of contaminants into air, ~~except where the discharge is undertaken in association with a use of land controlled by Rule 13-1.~~	**Permitted**	(a) Only dead animal matter and organic waste, which is sourced from the property* on which the offal hole of farm dump is located, shall be disposed of. (b) The waste shall not contain any hazardous substances or sewage. (c) There shall be no discharge into any waterbody. (d) The lowest point of the offal hole or farm dump shall be at least 1 m above the seasonally highest water table. (e) The offal hole or farm dump shall comply with the following separation distances: (i) 150 m from residences, marae, schools, public buildings and public recreation areas (ii) 10 m from property* boundaries (iii) 50 m from rare habitats and threatened habitats* and at-risk habitats* (iii) 10 m from bores, surface waterbodies including drains and the Coastal Marine Area (iv) 50 m from any Historical Heritage as identified in any District or Regional plan schedule or database or proposed plan. (f) Measures shall be used as necessary to reasonably minimise animal pests from entering the offal hole or farm dump. (g) There shall be no offensive or objectionable odour, dust, waste or spray drift to the extent that causes an adverse effect beyond the property* boundary.	

13-6 **Farm *animal effluent* including effluent from dairy sheds, poultry farms and existing piggeries**	The discharge of farm animal effluent* onto production land* including: (a) effluent from dairy sheds and feed pads (b) effluent from existing piggeries (c) sludge from farm effluent ponds (d) poultry farm litter and effluent and any consequential discharge of contaminants into air, ~~except where the discharge is undertaken in association with a use of land controlled by Rule 13-1.~~ This rule does not apply to discharges from new piggeries.	**Controlled**	(a) There shall be no discharge of effluent into a waterbody, including drains or from effluent holding facilities. (b) All effluent storage and treatment facilities (including sumps and ponds) newly established or extended (including deepening) after the date the Plan is made operative^) shall be sealed so as to restrict seepage of effluent. The permeability of the sealing layer shall not exceed $1x10^{-9}$ m/s. (c) The discharge shall comply with the following separation distances: (i) for discharges of piggery effluent, 150 m from residences, marae, schools, public buildings and public recreation areas (ii) for other discharges, 20 m from residences, marae, schools, public buildings, public recreation areas (iii) for all discharges, 50 m from rare habitats, threatened habitats* and at-risk habitats* (iv) for all discharges, 20 m from bores, surface waterbodies, including drains public roads and the Coastal Marine Area (v) for all discharges, 50 m from any Historical Heritage as identified in any District or Regional plan schedule or database or proposed plan. (d) Stormwater from ancillary roof areas or hardstand areas, which does not contain farm animal effluent, shall not discharge to the effluent storage facility. (e) A nutrient budget, which takes into account all other sources of nitrogen and which is designed to minimise nitrogen leaching rates, shall be used to plan and carry out the animal effluent application.	Control is reserved over: (a) Amount of effluent per discharge and frequency of discharge (b) Measures to manage the ponding of effluent on the discharge area (c) Maintenance of vegetative cover (d) Odour management (e) Effects on rare and threatened habitats* and at risk habitats* (f) Contingency measures for events of mechanical failure and prolonged wet weather (g) Duration of consent (h) Review of consent conditions, and (i) Compliance monitoring. Resource consent applications under this rule will not be notified and written approval of affected persons will not be required (notice of applications

			(f) There shall be no offensive objectionable odour, dust, waste or spray drift to the extent that causes an adverse effect beyond the property* boundary.	need not be served on affected persons).
13-7 **Effluent from new piggeries**	The discharge of effluent from new piggeries onto production land, and any consequential discharge of contaminants into air.	**Discretionary**		
13-8 **Agricultural land uses not covered by other rules**	Agricultural land uses not regulated by Rule 13-1 or any rules in Chapter 12 (including any discharge of contaminants to land or water from farm animals associated with the land use). For the avoidance of doubt this rule applies to: (a) agricultural land use types not regulated by Rule 13-1 in all areas (b) existing agricultural land uses that are regulated by Rule 13-1 but are not in Water Management Sub-zones that are specified in Rule 13-1 (c) agricultural land use types that are regulated by Rule 13-1 before the date	**Permitted**		

	the rule comes into force.			

Rule Guide:

Activities in rare habitats and threatened habitats* and at-risk habitats* are regulated by Rules 12-7 and 12-8. Agricultural activities at other locations are regulated as follows:

(a) **Discharges not covered by rules** – Agricultural discharges that are not covered by the rules above are a **discretionary activity** under Rule 13-27.
(b) **Activities that do not comply** – Activities that do not comply with the permitted or controlled activity rules above are a **discretionary activity** under general Rule 13-27 or a restricted activity under Rule 13-27a.

ATTACHMENT 8 – Policies 6-12, 6-17, 6-19 and Rule 15-1

Policy 6-12: Reasonable and justifiable need for water^

Subject to section 14 (3) (b) RMA The amount of *water*^ taken by resource users shall be reasonable and justifiable for the intended use. In addition*,….[as proposed by the Officers' Report]*

Policy 6-17: Approach to setting minimum flows and core allocations

(a) Where good hydrological information, such as a specific water^ resource study or a long-term flow record, is available it shall be used to set minimum flows and core allocations in Schedule B.

(b) Where information described in (a) above is not available, the minimum flows and core allocations set out in Schedule B shall generally be a minimum flow equal to the estimated or calculated one-day mean annual low flow, and a core allocation equal to a percentage of the minimum as specified in Schedule B taking account of the need to provide for takes in accordance with section 14(3)(b) RMA.

Policy 6-19: Apportioning, restricting and suspending takes in times of low flow

During times of low flow, takes from rivers^ shall be managed in the following manner:

(a) **Allowed and Permitted takes** – Takes that are allowed under section 14 (3) (b) RMA or permitted by this Plan (surface water^ and groundwater takes) or are for fire-fighting purposes shall be allowed to continue regardless of river^ flow

(b) **Essential takes** – The following core water^ allocation takes shall be deemed essential and shall be managed in the manner described.

(i) takes ~~greater than permitted by this Plan (and therefore subject to resource consent^)~~ that are required to meet an individual's reasonable domestic needs or for the reasonable needs of an individual's animals for drinking water that are the subject of a resource consent shall be allowed to continue regardless of river^ flow.

Reasonable needs shall be calculated as follows:

a. up to 250 litres per person per day for domestic needs

b. up to 70 litres per animal per day for stock drinking water^

(ii) takes required to meet the reasonable needs of hospitals, other facilities providing medical treatment, marae, schools or other education facilities, defence facilities or correction facilities shall be allowed to continue regardless of river^ flow

(iii) takes which were lawfully established at the time of this Plan becoming operative^ which are required for the operation^ of industries which, if their take were to cease, would significantly compromise a community's ability to provide for its social, economic or cultural well-being or for its health or safety (including the welfare of animals and the hygienic production and

processing of perishable food), shall be allowed to continue regardless of river^ flow, but shall be required to minimise the amount of water^ taken to the extent reasonable

(iv) public water supply* takes shall be restricted to a total public water^ consumption calculated as follows:
(A) an allocation of 250 litres per person per day for domestic needs, plus
(B) an allocation for commercial use equal to 20% of the total allocation for domestic needs, plus
(C) an allocation which meets the reasonable needs of those facilities and industries listed under subsections (b)(ii) and (b)(iii) where such facilities and industries are connected to the public water supply* system, plus
(D) any allocation necessary to cater for the reasonable needs of livestock that are connected to the public water supply* system, plus
(E) an allocation for leakage equal to 15% of the total of subsections (A) to (D) above.

(c) Non-essential takes – Other core water^ allocation takes, including irrigation takes but excluding the essential takes described under subsection (b), shall be managed in the following manner:

(i) water^ takes shall be required to cease when the river^ drops is at or below its minimum flow, as set out in Policy 6-16

(ii) water^ takes shall be allowed to recommence once the river^ flow has risen above its minimum flow.

(d) Meaning of 'core water^ allocation take' – For the purposes of this policy, a core water^ allocation take means a take that has been granted consent in accordance with a core water^ allocation made under Policy 6-16, or in accordance with a previous core water^ allocation regime.

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
15-1 **Minor takes and uses of surface water**	The taking and use of surface *water*^ pursuant to s14(1) RMA (in addition to the taking of surface water as allowed by s14(3)(b) of the RMA) ~~except where the *water*^ take is controlled under Rule 13-1.~~	Permitted	a) The rate of take shall not exceed: ~~(i) 30 m^3/d per *property** where the *water*^ is required for an individual's reasonable domestic needs and/or the reasonable needs of an individual's animals for drinking *water*^,~~ ~~(ii) 15 m^3/d per *property** where the *water*^ is for any other use.~~ ~~The rates of take allowed under (i) and (ii) cannot be added: the maximum allowable rate of take under this *rule*^ is 30 m^3/d per *property**.~~ (i) 15 cubic metres per day (calculated on a net take basis) of water from properties in use for *market gardening, cropping, intensive sheep and beef farming;* or the keeping of pigs or poultry (either indoors or free range). (ii) 1 cubic metre per day (calculated on a net take basis) for every 5 hectares of land in use for *dairy farming* up to a maximum of 30 cubic metres per day*; or* (iii) 5 cubic metres of water per day (calculated on a net take basis) from all properties *greater than 4 hectares and not in use for market gardening, cropping, intensive sheep and beef farming;* the keeping of pigs or poultry (either indoors or free range).*or dairy*	

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
15-1 **Minor takes and uses of surface water**	The taking of groundwater pursuant to section 14(1) RMA, (in addition to the taking of surface water as allowed by s14(3)(b) of the RMA)~~except where the water take is controlled under Rule 13-1~~	Permitted	*farming; or* (iv) 1.5 cubic metres of water per day (calculated on a net take basis) from *all properties less than 4 ha in size and not in one of the uses described under subsection (i) above.* (b) The rate of take shall not exceed 2.0 l/s. (c) An intake screen with a mesh aperture size not exceeding 3 mm in diameter shall be used and the intake velocity shall not exceed 0.3 m/s. (d) The take shall not be from any *wetland*^ that is a *rare habitat** [2] or *threatened habitat**. (e) The *water*^ shall be used on the subject *property**. The Regional Council shall be notified in writing of the location of the take, the maximum instantaneous (a) The rate of take shall not exceed 50 m3/d per *property**. (b) The take shall not be located within 50 m of any other *bore** (c) The take shall not be located within 100 m of any *river*^, *Lake*^ or spring, or within 200 m of any *wetland*^ that is a	

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
			*rare habitat** or *threatened habitat**. (d) The take shall not lower the *water*^ level in any *wetland*^ that is a *rare habitat** or *threatened habitat**. e) There shall be a means of controlling the rate of flow where a *bore** would otherwise be free-flowing, and no *water*^ shall be allowed to run to waste. (f) The *water*^ shall be used on the subject *property**. (g) The Regional Council shall be notified in writing of the location of the take, the maximum instantaneous rate of take and the intended use of *water*^.	

ATTACHMENT 9 – Addition to Glossary

Nutrient Budget means a statement of the total nutrient balance for a specific area or production system, taking into account all the nutrient inputs and all the outputs and prepared by a person accredited as nutrient advisor in accordance with the Code of Practice for Nutrient Management [2007].