BEFORE THE ENVIRONMENT COURT
AT WELLINGTON

IN THE MATTER	of appeals to the Environment Court under clause 14 of the First Schedule to the Resource Management Act 1991 (RMA)
AND	
IN THE MATTER	of the Proposed One Plan Consolidated Regional Policy Statement, Regional Plan and Regional Coastal Plan for the Manawatu-Whanganui Region
BETWEEN	**FEDERATED FARMERS OF NEW ZEALAND (ENV-2010-WLG-000148)**
AND	**WELLINGTON FISH AND GAME COUNCIL (ENV-2010-WLG-000157)**
	Appellants
AND	**MANAWATU-WHANGANUI REGIONAL COUNCIL TRADING AS HORIZONS**
	Respondent

STATEMENT OF EVIDENCE OF CHRISTOPHER HANSEN

1. QUALIFICATIONS/EXPERIENCE

1.1 My name is Christopher Adrian Hansen. I am a resource management planning consultant, and Director in Chris Hansen Consultants Ltd.

1.2 I have a Bachelor of Regional Planning degree (Honours) from Massey University (1980). I am a full member of the New Zealand Planning Institute and a member of the Resource Management Law Association.

1.3 Prior to establishing my own consultancy in 2011, I have practiced as a resource management planner in a range of organisations for over 30 years. From 1980 to 1982 I worked for the Ministry of Transport as an advisory officer in coastal and maritime planning and from 1982 – 1986 I worked with the Ministry of Works and Development as a planner based in its Head Office

and then the Wellington District Office. Between 1988 and 1989 I spent time at the Ministry for the Environment assisting with the 4th phase of the Resource Management Law Reform (RMLR), and in particular determining how the proposed Resource Management Act (RMA) was likely to be implemented by councils. In 1989 to 1995 I held the position of Advocacy Manager in the Wellington Conservancy of the Department of Conservation (DoC) responsible for a range of functions, including DoC's involvement in the RMA and planning under the Conservation Act. From 1996 to 2005 I was the Environmental Team Leader at the Wellington Office of Tonkin & Taylor Ltd, an environmental and engineering consultancy. Between 2007 and 2010 I held the position of National RMA Planning Manager with Sinclair Knight Merz, an engineering consultancy.

1.4 I had some involvement in the process leading up to the Proposed One Plan (POP) prepared by Horizons, and reviewed and provided advice to Ravensdown Fertiliser Co-operative Ltd (Ravensdown) on early discussion drafts. Subsequent to the notification of the POP, I reviewed the documents for Ravensdown, prepared a submission and further submission, provided a statement of evidence to the Hearing Commissioners on 19 October 2009 and summarised the decision by Horizons on matters raised in Ravensdown's submission. While Ravensdown did not appeal the decision of Horizons, I assisted Ravensdown by reviewing the appeals of other parties, and assisted in preparing a s.274 Notice for Ravensdown to become a party to the appeals of Federated Farmers of New Zealand (Federated Farmers) and Wellington Fish & Game Council (Fish & Game). Subsequent to the lodging of the s.274 Notice, I have attended mediation and expert planner's conferencing on the matters of interest to Ravensdown.

1.5 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note. This evidence has been prepared in accordance with it and I agree to comply with it. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

2. SUMMARY OF EVIDENCE

2.1 The policies and rules (and in particular Policy 6-7; Policy 13-2C and Rule 13-1) are not the most appropriate for achieving the objectives because they are

not efficient in their implementation, and are not effective as they will not gain the environmental benefits (in terms of water quality) intended.

2.2 In addition, the cost associated with implementing the regulation appears to outweigh the environmental benefits, and the risk of not acting, or in this case not regulating, seems low.

2.3 I am left with the conclusion that there is no reason why a Permitted Activity rule for dairy farm land use activities for existing and new operations cannot be adopted, and represents good planning practice.

2.4 The concerns raised by Dr Roberts regarding the Natural Capital concept and LUC approach are sufficient enough for a planner to adopt a cautionary/pragmatic approach to addressing water quality issues associated with the leaching of nitrogen, and best practice and the preparation of Nutrient Management Plans is the most appropriate approach.

2.5 The relief sought by Federated Farmers supports the precautionary/pragmatic approach referred to above, and the amended policies and rules are appropriate.

3. RAVENSDOWN'S INVOLVEMENT IN THE POP

3.1 Ravensdown lodged a submission to the Notified Version of the POP (NV – POP) that overall acknowledged the POP sought good outcomes and was generally supported. At a general level, Ravensdown particularly noted the FARM Strategy and controlled activity status for specific farming activities and considered these provisions were overly intrusive. At a specific level Ravensdown submitted on (amongst other things) the appropriateness and acceptability of using the LUC approach, the requirements of Policy 6-7, the control of farming activities in Rule 13-1 and the leaching levels set in Table 13.2.

3.2 Ravensdown did not lodge its own appeal to the decision of Horizons, and generally accepts the approach taken in the Decisions Version of the POP (DV – POP).

3.3 Notwithstanding this, Ravensdown wished to become a party to an appeal by Fish & Game whom generally seeks the provisions of the NV – POP to be retained, and Federated Farmers whom generally seeks amendments to the DV – POP that are consistent with Ravensdown's own submission. I have included a summary of the matters covered in Ravensdown's s.274 Notice in Attachment 'A' to this evidence.

4. STRUCTURE OF EVIDENCE

4.1 I have structured my evidence to be essentially in three parts:

(i) I provide a statutory and policy context to consider a number of the broader matters relevant to Ravensdown's concerns.

(ii) I comment on two key matters of interest to Ravensdown:

- The setting of maximum nitrogen leaching limits based on the Natural Capital of each LUC class of land
- The regulation of dairy farming land use activities

(iii) I address the particular matters raised by Ravensdown in its Section 274 Notice to appeals by Federated Farmers and Fish & Game:

- Policy 6-7
- Objective 13-1
- Policy 13-2C
- Table 3.2
- Rule 13-1

For each of these matters, I provide a background to the provision as contained in the NV – POP and DV – POP; an outline of the matters contained in the two appeals Ravensdown is a s.274 party to; an assessment of the issues; the relief sought.

5. STATUTORY AND POLICY CONTEXT

5.1 I believe a brief overview of the statutory and policy context of the POP provides a useful reference point for assessing from a planning perspective, particular matters that are discussed later.

Statutory Framework

5.2 As the Court will be well aware, Part 5 of the RMA provides guidance on regional plans. The purpose of a regional plan is to assist a regional council

to carry out any of its functions in order to achieve the purpose of the RMA (s.63). The functions of the regional council to give purpose to the RMA are outline in s.30. A regional plan is prepared in accordance with Schedule 1 of the Act.

5.3 A key aspect of the statutory framework is the duty a regional council has when preparing a regional plan under s.32, and in particular an evaluation must be carried out in line with the following:

"(3) An evaluation must examine—

- *(a) the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and*
- *(b) whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.*

(4) For the purposes of the examinations referred to in subsections (3) and (3A), an evaluation must take into account—

- *(a) the benefits and costs of policies, rules, or other methods; and*
- *(b) the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods."*

5.4 In my view, from the above s.32 evaluation requires consideration of the following matters:

(i) A need to ensure the policies, rules or methods are most appropriate for achieving the objectives, when considering their efficiency and effectiveness.

(ii) The benefit and costs of the policies, rules or other methods.

(iii) A need to consider the risk of acting or not acting if there is uncertain or insufficient information about subject matter of the policies, rules or methods.

I will consider each of these matters in the context of the POP. Just by way of general comment, I consider the term efficiency is best described as *"the state or quality of being efficient'* and effectiveness is best described as *"successful in producing a desired or intended result".*[1]

Planning Assessment

5.5 There is no question that the matters being addressed in the Surface Water Quality Section of the POP are within the functions of s.30 of the RMA.

[1] Oxford Dictionary definitions.

5.6 In relation to the first matter relating to s.32 (3), I note the evidence of Dr Ledgard[2] for Fonterra where he determines through analysis of data from dairy farms through New Zealand that the average N leaching loss from the 143 dairy farms in the Region was 22 kg N/ha/yr which was the lowest of all the regions in New Zealand. Dr Ledgard[3] also determines that a 75th percentile for dairy farms in the region is 27 kg/N/ha/yr, meaning 25% of farms are above this limit, but that much of the variability is management-dependent. In particular Dr Ledgard identifies in Table 3 (page 20) of his evidence mitigation options with low net implementation costs, and recommends farms in the highest quartile of N-leaching in the Region (those above 27 kg N/ha/year) be required to undertake a range of Tier 1 options[4]. The question has to be asked, then, whether the proposed policies and rules are efficient and effective, and therefore the most appropriate for achieving the objectives of the POP.

5.7 In relation to the second matter relating to s.32 (3), Dr Scarsbrook[5] states there is strong evidence of improving water quality in some of the Region's major rivers, and that nutrient levels in the Manawatu and Wanganui Rivers are either stable or have been improving over the last decade. He concludes that this would indicate that current controls and management actions are working, and that the imperative for region-wide controls on diffuse nutrient inputs into streams has reduced. From these observations, I would question whether the overall environmental benefits of the proposed policies and rules have been adequately evaluated. Furthermore, the question has to be asked whether the benefits justify the costs associated with implementing the policies and rules. I note council's own assessment of the cost of implementing Rule 13-1 is $58m[6]. I also note the evidence of John Ballingall[7] for Fonterra who concluded that the economic analysis of the POP was not sufficient. When considering all of the above, I have serious doubts that the costs to the resource user of implementing the policies and rules (and in

[2] Evidence of Dr Stewart Francis Ledgard, of Fonterra; 14 March 2012; Paragraphs 23 (Page 4) and 30 (Page 7).
[3] Evidence of Dr Stewart Francis Ledgard, of Fonterra; 14 March 2012; Paragraphs 11 (Page 3)
[4] Evidence of Dr Stewart Francis Ledgard, of Fonterra; 14 March 2012; Paragraphs 112 (Page 28)
[5] Evidence of Dr Michael Robert Scarsbrook of Fonterra; 14 March 2012; paragraph 95 – 98; pages 30, 31
[6] Neild and Rhodes, Economic Impacts of Proposed One Plan LUC Nitrogen Leaching/Run-off Values; August 2009, page 7
[7] Evidence of John Stacey Ballingall of Fonterra; 14 March 2012; paragraph 55; page 10

particular Policy 6-7; Policy 13-2C and Rule 13-1) will achieve the environmental benefits being sought. I will discuss this matter later in this evidence.

5.8 I am also not convinced that Horizons have adequately identified the water quality issues to be managed, and in this case what activities are contributing to water quality and in particular nutrient levels in the rivers of the region. As discussed above, Dr Scarsbrook concludes there is a downward trend of N, and that this downward trend is a result of current controls and management action is working. Accepting this conclusion, I see little point in adopting a regulatory approach to controlling dairy farming activities as proposed by the POP. This is not, in my view, sound resource management planning, and does not meet the s.32 evaluation requirements.

5.9 Based on the conclusions of Dr Scarsbrook, I conclude that the risk of not acting is low, and the environmental benefits to be gained from implementing the policies and rules of the POP (particular provisions are discussed below) does not justify the costs incurred by resource users. In particular I consider a Permitted Activity Rule (PA Rule) for dairy farm land use activities for existing and new operations is justified and represents good planning practice, and I provide later in my evidence a draft PA Rule and the rationale for the Court's consideration.

5.10 Overall I conclude the policies and rules are not the most appropriate for achieving the objectives because they are not efficient in their implementation, and are not effective as they will not gain the environmental benefits (in terms of water quality) intended. In addition, the cost associated with implementing the regulation appears to outweigh the environmental benefits, and the risk of not acting, or in this case not regulating, seems low. I am left with the conclusion that there is no reason why a Permitted Activity rule for dairy farm land use activities for existing and new operations cannot be adopted, and represents good planning practice.

POP Policy Framework

5.11 Ms Barton in her evidence outlines the policy framework in the DV - POP for managing water quality. In principle, I consider a water management zone/sub-zone approach is a pragmatic and appropriate policy framework to

manage water quality, and I am aware of several other regional councils adopting such an approach. In particular I support the identification of target catchment. Notwithstanding this, I consider there are two additional steps that, in my view, make good planning sense beyond the three tier approach Ms Barton outlines in paragraph 25 (page 4883) of her evidence. In particular I refer to the evidence of Dr Scarsbrook[8] who identifies the need for an assessment as to whether the water quality numeric are achievable, and for the community to be involved in determining whether the water quality numeric to be met are desirable[9]. Dr Scarsbrook also highlights NPS for Fresh Water Management and how it anticipates the regional council to work with the community. Dr Roberts' evidence[10] also highlights an alternative option for setting water quality standards with the community involvement. I am not an expert in the science associated with selecting the numeric, nor determining whether the numeric agreed to is achievable. Similarly, I am not an expert in community expectations of water quality standards. I accept that in some cases the statutory plan notification process could be considered as an appropriate way of determining whether the community is accepting of the water quality numeric set. However, this presumes everyone is knowledgeable about the RMA plan preparation process, and has the time and ability to be involved in the process. I question whether such as assertion is valid.

6. THE SETTING OF MAXIMUM NITROGEN LEACHING LIMITS BASED ON THE NATURAL CAPITAL OF EACH LUC CLASS OF LAND

6.1 Both the NV – POP and DV – POP incorporates an approach for setting nitrogen leaching rates based on the Natural Capital of each LUC class of land, and Ms Barton proposes further amendments incorporating this approach. If it assumed that nitrogen leaching needs to be controlled and monitored (the views of Dr Scarsbrook question such an assumption), then from a planners perspective, adopting a method to determine nitrogen leaching rates is important. Once such a method is identified, it can then be carried in the policies, rules and methods. Such an approach is accepted

[8] Evidence of Dr Michael Robert Scarsbrook of Fonterra; 14 March 2012; paragraph 48, page 16; paragraph 56, page 18
[9] Evidence of Dr Michael Robert Scarsbrook of Fonterra; 14 March 2012; paragraph 38, page 13
[10] Statement of Evidence of Anthony Roberts; March 2012; paragraph 5.8; page 16

planning practice when the method has tried and tested science behind it and certainty of outcomes are known and appropriate. However, in the case of combining the Natural Capital concept and the LUC approach to determine nitrogen leaching rates, there appear two camps of technical experts, as noted in the recent Record of Technical Conferencing on LUC/Best Practice dated 23 March 2012. In my view, this gives a planner real issues, and a precautionary/pragmatic approach is required.

6.2 I acknowledge the evidence of Dr Ants Roberts on behalf of Ravensdown who outlines concerns he has with the Natural Capital and LUC approach adopted by Council. In particular Dr Roberts considers the concept of Natural Capital (the basis by which the LUC approach is used to calculate cumulative loss maximums in Table 13.2 of DV – POP) has no valid scientific basis and is still under discussion/development/debate among the international community[11].

6.3 In addition, Dr Roberts concludes that to use the LUC system to set N loss maximums is arbitrary and inappropriate, given that it takes no account of sustainable improvements in productivity to circumvent some of the limitations imposed by a farm's physical resources[12]. Dr Roberts outlines an alternative approach to determining N loss targets, including a process involving the Council and communities within relevant Water Management Sub-zones deciding on an acceptable (and practically achievable) water quality standard relative to the ideal 'target loads' and the timeframe over which to achieve this standard. Once this is done, then within each Water Management Sub-zone the N loss for each individual farm should be estimated using the OVERSEER® programme. This would culminate in a Nutrient Management Plan being prepared for each farm showing what N loss mitigation strategies have been put in place and outcomes of this on farm N loss as modelled annually.[13]

6.4 I accept the concerns raised by Dr Roberts regarding the approach adopted by Council to set N loss maximums, and I also agree with the recommended alternative approach that involves the community to set acceptable water quality standards and a timeframe to achieve 'target loads'. This is a similar

[11] Statement of Evidence of Anthony Roberts; March 2012; paragraph 2.1, page 3
[12] Statement of Evidence of Anthony Roberts; March 2012; paragraph 2.3, page 4
[13] Statement of Evidence of Anthony Roberts; March 2012; paragraphs 5.8 – 5.11, pages 16/17

approach as being taken in the Hurunui Catchment (North Canterbury) and adopts, in my view, a pragmatic approach that represents sound planning practice while achieving agreed environmental outcomes.

6.5 I am of the view that the concerns raised by Dr Roberts are sufficient enough for a planner to adopt a cautionary/pragmatic approach to addressing water quality issues associated with the leaching of nitrogen and best practice and the preparation of Nutrient Management Plans is the most appropriate approach.

7. THE REGULATION OF DAIRY FARMING LAND USE ACTIVITIES

7.1 As I have stated above, I believe an effects based approach to managing land use activities requires that there are demonstrable environmental benefits for adopting objectives, policies and rules, and in particular if introducing regulation. This is even more important when controlling activities that have traditionally been allowed. I believe the onus is on the regional council to have well defined the environmental issues, identified the land use activities contributing to the environmental issues, and then decided on how to manage or control those activities to gain the highest environmental benefits for the least cost to the resource user. This is in essence the intent of the s.32 evaluation.

7.2 Ms Barton[14] outlines a regulatory approach to dairy farming land use activities. In my experience, it is not common planning practice in regional land plans to regulate a particular farming activity. The exceptions to this position that I am aware of are specific plan provisions for the Lake Taupo Catchment introduced by plan change into the Waikato Regional Plan, and catchment of the Rotorua, Rotoiti, Ōkareka, Rotoehu and Ōkaro Lakes in the Environment BoP Regional Land and Water Plan. It is my understanding that both of these examples are exceptions from a planning perspective in that they target specific land uses in a specific area to address a well-defined water quality issue. I fully support an approach were a regional plan has a mechanism by which a plan change can be used to introduce regulation of land use activities, once there is a robust assessment of the environmental

[14] Statement of Evidence of Clare Barton; 14 February 2012; paragraph 7; page 4874

issues, and clear environmental benefits identified from adopting this mechanism. The Waikato Regional Plan is an example of such an approach.

7.3 I was interested in reading the Section 42A Report of Mr Greg Carlyon to the Hearings Committee. In particular in Paragraph 28 of Mr Carlyon's Report provided a very helpful overview of the stated vision for the POP which included, amongst other things, to reflect what the community wants and to aim to permit day to day resource use activities that have minor adverse effects.[15]

7.4 As stated above, I agree with the concerns expressed by Dr Roberts regarding the use of the Natural Capital concept, and then combining this concept with the old LUC approach to determine an N loss rate. If these concerns are accepted, and the use of these two mechanisms to determine an N loss rate, then in my view the approach in the DV – POP and the subsequent amendments proposed by Ms Barton are inappropriate and unnecessary. To take a regulatory approach to all dairy farming land use activities in the region, based on setting an N loss rate using a flawed system, is in my view, not good resource management practice. In practice, there will be dairy farming land use activities that have low N loss rates (for a number of reasons such as good farm management practices; location to waterways; soil type; rainfall conditions etc.) and therefore adverse effects that are less than minor or minor, but that are still required to apply for a controlled activity resource consent. In my view, such a requirement may impose unnecessary and inappropriate costs on a resource user without demonstrable benefits. This concern is also expressed in the evidence of Mr John Ballingall, who concluded *"…the economic analysis to date is not sufficiently rigorous to allow a proper evaluation of whether the POP policies and rules are the most appropriate for achieving their objectives, "having regard to their efficiency and effectiveness"*[16].

8. POLICY 6-7

Background

8.1 I have included as Attachment 'B' the versions of Policy 6-7 included in the NV – POP and DV – POP. The key matters of interest are:

[15] Section 42A Report of Mr Greg John Carlyon; August 2009; Paragraph 28, Page 6
[16] Statement of Evidence of John Stacey Ballingall of Fonterra; 14 March 2012; para. 56, page 10

(i) In the NV – POP intensive farming land use activities are to be regulated in targeted Water Management Zones; these activities are to prepare a Nutrient Management Plan.

(ii) In the DV – POP existing farming activities are to be regulated in specific Water Management Sub-zones; new dairy farming throughout the region is to be regulated; activities are not to exceed nitrogen leaching rates to be based on the Natural Capital of each LUC class of land.

Matters Appealed

8.2 Federated Farmers sought Policy 6-7 (ia)[17] be amended as follows:

"(ia) New dairy farming and land use activities shall ~~must~~ be regulated throughout the region ~~so as not to exceed nitrogen rates based on the natural capital of each LUC class of land~~ to achieve nutrient management planning, the exclusion of dairy cattle from surface water bodies and their beds and the provision of dairy cattle crossings over some rivers."

Ravensdown supported the amendments sought.

8.3 Fish & Game sought that Policy 6-7[18] be amended as per the NV – POP and such other matters as raised by the appeal point. Ravensdown opposed the relief sought.

8.4 Council's position is outlined in the expert planning evidence of Clare Barton.[19] Ms Barton proposed Policy 6-7 be restructured into 3 parts[20]: Policy 6-7 applying to all dairy farming land use activities; Policy 6-7A relating to non-dairy rural land use activities; Policy 6-7B relating to existing dairy farms in Water Management Sub-zones not listed in Table 13.1 (Ms Barton proposed amendments can be found on pages 4957 – 4960 of her evidence). Of the amendments proposed by Ms Barton in her evidence, the following are of relevance to Ravensdown:

(i) The revised Policy 6-7 applies to all dairy farming land use activities and intends to regulate existing dairy farming in specified Water

[17] Federated Farmers appeal point 9, page 17 – 18
[18] Wellington Fish & Game Appeal; 17 November 2010; paragraph 6.11
[19] Statement of Planning Evidence by Clare Barton, 14 February 2012
[20] Statement of Planning Evidence by Clare Barton, 14 February 2012, Section 6.4.2.3 of proposed wording changes included in Attachment 1; pages 4957 - 4960

Management Sub-zones by setting nitrogen leaching rates for each LUC class of land

(ii) Establishes a 3 year step down approach to meet the nitrogen leaching rate for each LUC class of land – a regime is proposed that involves reductions in years 2 and 3 tied to loss limits set in Table 3.2

(iii) New dairy farming land use activities are regulated throughout the region so as not to exceed nitrogen leaching rates based on the Natural Capital of each LUC class of land

Assessment

8.5 The Explanation and Principal Reasons (DV – POP) for Policy 6-7 states that: *"agricultural land uses contribute to water bodies not meeting the Region's targets for nutrients, faecal contamination and sediment levels. These need to be targeted for control in problem catchments and through the Regional Council's Sustainable Land Use Initiative (SLUI) and Whanganui Catchment Strategy and the regulation of dairy farming* (Policy 6-7).* ***Control will centre around using best practice management techniques and requiring nutrient management plans****" (my emphasis added).*

8.6 I find it interesting that the DV – POP changed considerably the emphasis of Policy 6-7 to provide no option but the regulation of existing and new dairy farming land use activities. This seems contrary to the clear intent of the Explanation and Reasons to Policy 6-7, which was amended in the DV – POP, but remains focussed on control to be best practice management and nutrient management plans. This inconsistency is unexplained.

8.7 I was also interested in reading the Section 42A Report of Mr Greg Carlyon to the Hearings Committee. In particular in Paragraph 28 of Mr Carlyon's Report provided a very helpful overview of the stated vision for the POP which included, amongst other things, to reflect what the community wants and to aim to permit day to day resource use activities that have minor adverse effects.[21]

8.8 While the NV POP took a more pragmatic approach to managing land use activities affecting water quality, there were a number of issues with the policy, including 'intensive farming land use activities' were not well defined,

[21] Section 42A Report of Mr Greg John Carlyon; August 2009; Paragraph 28, Page 6

the targeted Water Management Zones not well defined. However, in my view the DV – POP complicated matters with its focus on regulating existing dairy farming land use activities in specified Water Management Sub-zones; regulating new dairy farming land use activities throughout the region; and combining the Natural Capital concept with the use of the LUC class of land to determine nitrogen leaching rates.

8.9 I have expressed my views on regulating dairy farming land use activities and adopting the combined Natural Capital concept with the LUC class of land above, and do not intend to repeat these views here.

8.10 In my view, the approach taken in the DV – POP and subsequent amendments proposed by Ms Barton does not represent an effects-based approach, does not meet the vision for the POP as outlined by Mr Carlyon, and more importantly does not promote the sustainable management of natural and physical resources as required by the RMA.

8.11 I therefore do not support the DV – POP or amendments to Policy 6-7 promoted by Ms Barton that use the Natural Capital and LUC approach. I accept that there are aspects of the amendments proposed by Ms Barton that are worthwhile and address some of the inadequacies of the policy, but I consider on balance Policy 6-7 as written in the DV – POP and amended by Ms Barton is flawed.

8.12 I therefore generally support the relief sought by Federated Farmers to have reference to nitrogen leaching rates based on the Natural Capital of each LUC class of land deleted from Policy 6-7. I note, however, that Federated Farmers seeks a further amendment to Policy 6-7 that changes that new dairying farming land use activities *'must'* be regulated to *'shall'* be regulated. In practice, I see little difference in this word change, and I do not consider the proposed word change addresses two key points. Firstly, it does not provide the opportunity for non-regulation of new dairy farming land use activities that have N leaching rates that result in adverse effects that are less than minor or minor. Secondly, it does not provide the opportunity for existing dairy farming land use activities (in (i) of DV – POP) that have N leaching rates that result in adverse effects that are less than minor or minor. Later in my evidence I provide a Permitted Activity rule for consideration by the Court to provide for

such activities. I therefore consider Policy 6-7 (i) and (ia) of DV – POP should be amended to replace the word *'must'* with *'may'* to allow for this effects based opportunity.

9. OBJECTIVE 13-1A

Background

9.1 I have included as Attachment 'C' the versions of Objective 13-1A included in the DV – POP. Objective 13-1A was not included in the notified One Plan and was not submitted on by Ravensdown.

Matters Appealed

9.2 Fish & Game[22] sought a word change in paragraph (a) to have *'regard'* to the values and management objectives un Schedule AB replaced with a direction to *'recognise and provide for'* those values and management objectives. The appellant considered the change necessary in order for the life supporting capacities of water bodies to be sustained and for the POP to adequately address the main issues it identifies. The appellant considered that having regard to the values and management objectives in Schedule AB will inevitably result in those values and management objectives being compromised.

9.3 I note in Attachment 2 of Ms Barton's evidence[23] that Objective 13-1A remains unchanged from the DV – POP, so I assume Council does not support the amendment sought by Fish & Game.

Assessment

9.4 In essence the NV - POP lacked any objectives relating to discharges to land and water, and Objective 13-1A has been included into the DV – POP in order to fill that gap and provide the justification for regulation.

9.5 In my view, Objective 13-1A of the DV – POP is consistent with s.7 (d) of the Act by having regard to intrinsic values of ecosystems, and in this case the values identified in Schedule AB. I do not agree that the Objective as written would inevitably result in the Schedule AB values being compromised. In my

[22] Wellington Fish & Game Appeal; 17 November 2010; paragraph 6.25
[23] Statement of Evidence of Clare Barton of Horizons; 14 February 2012; Attachment 2; page 4979

view, when considering the suite of objectives, policies and rules contained in the DV – POP, the values and management objectives are given proper regard and the risk of Schedule AB values being compromised is minimised. I would seek Objective 13-1A included in the DV – POP be retained as written.

10. **POLICY 13-2C**

Background

10.1 I have included as Attachment 'D' the versions of Policy 13-2 included in the NV – POP and Policy 13-2C included in the DV – POP. The key matters of interest are:

- Cross-reference to Policy 6-7
- Nitrogen leaching rates based on Natural Capital for each LUC class of land used for dairy farming

Matters Appealed

10.2 Federated Farmers[24] specifically challenged the use of nitrogen leaching rates based upon the Natural Capital of each LUC class land for new conversions and considered this approach is based upon poorly developed science and assumptions regarding the effect that such controls may have on water quality throughout the region. Federated Farmers considered that this approach is not effects based, and sought the following amendment to Policy 13-2C:

- The words *'within the Water Management Sub Zones'* be added to the end of clause (b);
- Clause (c) be amended to read: *'ensure the nitrogen leaching from new dairy farming land uses <u>is minimised as far as reasonably practicable throughout the region</u>. ~~does not exceed nitrogen leaching rates based on the natural capital of each LUC class of land used for dairying farming, and~~'*
- Provide clear definitions and criteria used to determine what 'reasonable practicable' will involve regarding farm management

Ravensdown supported the amendments sought.

10.3 Fish & Game[25] sought Policy 13-2C be amended by deleting paragraph (b) which it considered is not sufficiently specific or directive, and amending

[24] Federated Farmers Appeal Point 22; page 36 - 38
[25] Wellington Fish & Game Appeal; 17 November 2010; Paragraph 6.27

paragraph (c) to include both new and existing dairy farming as well as other forms of intensive farming. Ravensdown opposed the amendments sought.

10.4 I note Ms Barton proposed substantial changes to Policy 13-2C associated with the changes proposed to Rules 13-1 and 13-1B[26]. Key amendments including:

(i) Applying Policy 13-2C to new and existing dairy farming land uses.

(ii) Give effect to Policy 6-7.

(iii) For existing dairy farming land uses – introduce nitrogen rates for each LUC class of land set out in Table 3.2 and a 3 year step down regime.

(iv) An exception for land on LUC Classes IV and VII where high rainfall.

(v) For new dairy farming land uses – rely on nitrogen leaching rates based on the Natural Capital of each LUC class of land.

(vi) Restricted Discretionary Activity for new and existing dairy farming land uses under Rules 13-1A and 13-1C.

(vii) Reasonably practicable farm management practices to reduce nitrogen leaching and achieve Table 13.2 leaching rates for each LUC class of land no later than the first 10 year anniversary of common catchment expiry dates (Table 11A-1).

Assessment

10.5 Policy 13-2 included in the NV – POP intended to provide guidance to decision makers considering consents for discharges to land. Policy 13-2 (d) identified a *'best practicable option (BPO)'* approach to prevent or minimise adverse effects where it is difficult to establish discharge standards for a particular activity to meet the water management approach to water quality and discharges contained in Chapter 6, or the likely adverse effects are minor and the costs small for a BPO approach.

10.6 Policy 13-2C is a new policy inserted in the DV – POP in response to changes initiated through decisions on Table 13.1, Table 13.2 and Rule 13-1 in order to deal with management of dairy farming land use. Policy 13-2C (b) retains the BPO approach for existing land uses, and Policy 13-2C (c) introduces a new requirement that nitrogen leaching from new dairy farming land uses does not exceed nitrogen leaching rates based on the Natural Capital of each LUC class of land used for dairying.

[26] Statement of Evidence of Clare Barton of Horizons; 14 February 2012; Table 3, page 4911

10.7 In my view, the NV – POP adopted a reasonable approach that was pragmatic and relied on tried and true mechanisms that where appropriate. While the DV – POP did adopt part of the NV – POP, the amendments to adopt nitrogen leaching rates based on the natural capital of each LUC class of land used for dairying farming is inappropriate and unnecessary, for reasons already stated above and in the evidence of Dr Roberts. Similarly, the amendments sought by Fish & Game and Ms Barton build on the DV – POP approach are not considered appropriate or necessary. In particular, Ms Barton refers to nitrogen rates set in Table 3.2 (to be addressed below), and the 3 year step down approach is not considered necessary or appropriate when considering the environmental benefits that are likely against the costs to the resource user.

10.8 I consider the relief sought by Federated Farmers is pragmatic and appropriate.

11. TABLE 13.2

Background

11.1 I have included as Attachment 'E' the versions of Table 13.2 included in the NV – POP and DV – POP. The key matters of interest are:

- Use of LUC class of land
- Nitrogen leaching rates based on Natural Capital for each LUC class of land used for dairy farming

Matters Appealed

11.2 Federated Farmers[27] opposed the continuous reference to LUC and Natural Capital and sought Table 13.2 to be deleted and the regulation of new dairy farms to be consistent with those for existing farms within the Water Management Sub-zones (Rule 13-1) so that reasonably practicable management practices that reduce nitrate leaching are implemented throughout the region. Ravensdown supported the amendment sought.

11.3 Fish & Game[28] sought that Table 13.2 be amended so that:

[27] Federated Farmers Appeal Point 24; pages 40 - 41
[28] Wellington Fish & Game Appeal; 17 November 2010; Paragraph 6.29

(i) It does not allow an increase in current levels of cumulative nitrogen leaching and sets standards for 5 years based on what can be achieved using best management practices and standards for 15 years relating to achieving standards set in Table D.2A; or

(ii) Delete new Table 13.2 and reinstate Table 3.2 as in NV – POP;

(iii) Amend rules relating to Table 3.2 to require a broader range of land use activities (including existing dairy farming) to achieve standards.

11.4 Ms Barton does not propose any changes to Table 13.2 as included in the DV – POP[29], but does propose that the nitrogen leaching number limits apply to existing as well as new dairy farm activities[30].

Assessment

11.5 Dr Roberts in his evidence has highlighted key concerns relating to setting nitrogen leaching limits based on the Natural Capital concept and LUC approach. If these concerns are accepted, then Table 13.2 cannot remain and should be deleted. I have already discussed above the need for a pragmatic approach to managing dairy farming land use activities, particularly in the context of the environmental benefits that may be gained, and the low risk of not acting. I therefore do not consider the amendments sought by Fish & Game are necessary or appropriate and do not represent sound resource management planning practice.

11.6 I consider the relief sought by Federated Farmers is pragmatic and appropriate.

12. **Rule 13-1**

Background

12.1 I have included as Attachment 'F the versions of Rule 13-1 included in the NV – POP and DV – POP. The key matters of interest are:

- The regulation of existing and new dairy farming land use activities
- Reliance on nitrogen leaching rates based on the Natural Capital of LUC class of land
- Reliance on nitrogen leaching limits included in Table 3.2

[29] Statement of Evidence of Clare Barton of Horizons; 14 February 2012; Attachment 2; page 4985

[30] Statement of Evidence of Clare Barton of Horizons; 14 February 2012; Table 3; page 4912

- Defining best practicable farm management practices

Matters Appealed

12.2 Federated Farmers[31] appealed a number of aspects of Rule 13-1 as included in the DV – POP, and sought for Rule 13-1 to be amended as follows:

(i) Dairy farming throughout the rural zones to be permitted activities

(ii) That practices deemed best practicable farm management be more specifically defined, including use of industry standards

(iii) Independent evaluation of 'reasonably practicable' by suitable qualified consultants

(iv) Include definition of Nutrient Management Plan (definition offered)

Ravensdown supported the amendments sought by Federated Farmers.

12.3 Fish & Game[32] appealed a number of aspects of Rule 13-1 as included in the DV – POP, and sought for Rule 13-1 to be amended as follows:

(i) Reinstate Rule 13-1 as in NV – POP, with the exclusion of water extraction provisions, and including the requirement to meet nitrogen loss standards specified in Table 13.2; or

(ii) Amend Rule 13-1 as in DV – POP, to require specific nitrogen leaching maximum standards, as specified in Table 3.2, for all dairy farming and other rural land uses (listed)

(iii) Reinstate FARM strategy as a performance criteria in DV – POP Rule 13-1, or incorporate aspects (listed) into conditions/standards

(iv) Amend DV – POP Rule 13-1 to classify any dairy farming, cropping, market gardening and intensive sheep and beef farming, and associated activities, as discretionary if they fail to meet cumulative nitrogen leaching maximum standards under Table 3.2, or they fail to adopt best management practice to reduce their environmental impact.

12.4 Ms Barton[33] proposes a number of amendments to Rule 13-1 as in the DV – POP. These amendments include:

(i) Rule 13-1 Existing dairy farming land use activities - Tying the preparation of Nutrient Management Plans (Rule 13-1 conditions/standards/terms (a)) to dates when the rules come into

[31] Federated Farmers Appeal Point 25; pages 41 - 44
[32] Wellington Fish & Game Appeal; 17 November 2010; paragraph 6.30
[33] Statement of Evidence of Clare Barton of Horizons; 14 February 2012; Appendix 2, page 4986 - 4992

force now proposed to be included in Table 3.1; Nutrient Management Plans to demonstrate cumulative nitrogen leaching maximums set out in Table 3.2 not exceeded, apart for 3 year step down regime proposed in Rule 13.1 conditions/standards/terms (b)

(ii) Rule 13-1B New dairy farming land use activities - Nutrient Management Plans to demonstrate cumulative nitrogen leaching maximums set out in Table 3.2 not exceeded – conditions/standards/terms (b)

Assessment

12.5 I have already addressed the fundamental question regarding whether dairy farming land use activities should be regulated, and conclude that there is little environmental benefit for the high costs associated with implementing regulation, and a low environmental risk of not regulating.

12.6 In principle, I am of the view that controls should only be imposed on land use activities where they are necessary to address an environmental effect, and will in fact be useful in addressing that effect. I believe this is a fundamental principle which is consistent with the intent of the RMA which is essentially enabling so long as adverse environmental effects are identified and managed to acceptable levels. I accept that achieving this outcome may be more difficult when dealing with complex, interdependent ecosystems and controls may be necessary as a result of cumulative effects, or to address effects may be greater than the community is prepared to accept. In these cases, in my view, there is a greater onus on the territorial authority preparing plans to understand the nature of the environment and land use activities that may have effects that need to be managed. I am not convinced that Horizons has done the work required to introduce the level of regulation it is introducing in the POP. In my view, the Council should undertake more work to determine actual levels of effect in identified catchments and sub catchments. That work might lead to the identification of priority catchments or sub catchments (such as has been done for Taupo in the Waikato).

12.7 While this is being done (say over the next 5 years), I accept that some level of control within these sub catchments listed in Table 13.1 (page 13-6 of the 21/12/11 version) is required, with the overall objective of reduction in nitrogen loss (N loss) across the region, is appropriate.

12.8 As discussed above and determined by Dr Roberts, LUC is an inappropriate basis for determining appropriate N loss levels on individual farms.

12.9 Because the objective is to achieve reduction in N loss levels, while further technical work is done, the priority in my view is to control those activities which have the highest N losses in the identified sub catchments.

12.10 Determining what is an appropriate point at which control should be exercised (i.e. the determination of an "X" value) can be done on the basis of the FertResearch/Dairy NZ records. The FertResearch/Dairy NZ information is, I am advised, robust and uses aggregated data that is then presented in the form of frequency distribution figures, representing N loss based on nutrient budgets across 144 dairy farms in the region. The information is sourced from budgets undertaken across all dairy farms required as part of the Clean Streams Accord.

(i) 80% of farms are producing less than approximately Y.
(ii) 50% of farms are producing less than approximately X.

An alternative approach could be to use the information provided by Dr Ledgard (referenced in Paragraph 5.6 of my evidence above) to determine the 'X' value. Using Dr Ledgard's numbers would see 75% of the farms producing less than approximately Y. In practice, Dr Ledgard's Y and the FertResearch/Dairy NZ Y are very similar.

12.11 As I understand from advice from Dr Roberts, the most appropriate method to calculate N loss is OVERSEER® which is used to prepare a nutrient budget. A nutrient management plan can then be prepared, if required, which sets out how the N loss figure determined by OVERSEER® will be achieved. While the OVERSEER® model has some limitations, it is still recognised as being the best available method of determining a nutrient budget figure for a farm (e.g. Canterbury, Waikato).

12.12 I therefore propose the following rules (I have provided a copy of these rules in the format included in the DV – POP in Attachment 'G' to this evidence):

Permitted Activity Rule for all dairy farms

12.13 Dairy farming land use activities are permitted everywhere in region outside the Water Management sub-Zones identified in Table 13.1 – their operation will depend on best practice and nutrient

12.14 Permitted activity status for all dairy farms in the listed catchments if they comply with the following:

a. Using OVERSEER® to produce a nutrient budget, applied by a trained person results in N loss of less than Xkg/N/ha/yr.

b. Preparation of a nutrient management plan which sets out how the N loss figure determined by OVERSEER® will be met must be prepared by 30 September each year.

c. Certified as an accurate record by a person who can demonstrate competency in agricultural nutrient management [including an advice note on how competency is determined].

d. Maintained for the property for a period of 7 years.

e. Made available to Horizons on request.

f. Farming is in accordance with the nutrient management plan prepared under (b).

g. Where there is a change in ownership of the property, the records or a copy of the records of the calculation shall be provided to the new owner at the time the ownership is transferred.

For those using OVERSEER® there is a financial incentive to reduce N loss, so reduction over time is anticipated for the permitted activities.

Controlled Activity Rule status for all dairy farms in the listed catchments

12.15 Controlled activity status for all dairy farms in the listed catchments if they comply with the following:

a. Using OVERSEER® to produce a nutrient budget applied by a trained person results in N loss of between Xkg/N/ha/yr and Ykg/N/ha/yr.

b. Provision of annual information on OVERSEER® and a nutrient management plan to Horizons by 30 September.

c. Certified as an accurate record by a person who can demonstrate competency in agricultural nutrient management [include an advice note on how competency to be determined].

d. Maintained for the property for a period of 7 years.

e. Farming is in accordance with the nutrient management plan prepared under (b).

f. Where there is a change in ownership of the property, the records or a copy of the records of the calculation shall be provided to the new owner at the time the ownership is transferred.

12.16 Controlled activity status for:

a. all dairy farms in the listed catchments if using OVERSEER® to produce a nutrient budget applied by a trained person results in N loss of greater than Ykg/N/ha/yr.

12.17 For these activities, the Council's ability to impose conditions is restricted to requiring measures which are 'reasonably practicable' in relation to;

a. Management practices to avoid or minimise the discharge of nitrogen the use of land;

b. The method of calculating N loss – nitrogen concentrations in soil drainage water;

c. Monitoring of the management practices;

d. Review of consent conditions.

12.18 In addition to the above rules, a number of adjustments to relevant policies (Policy 6-7 and Policy 13-2C) are required as already discussed above.

12.19 I am aware through mediation of a number of concerns raised by other parties on the difficulty of developing a permitted activity rule (PA Rule), and concerns about a previously proposed PA Rule developed by Federated Farmers, including:

a. The need for certainty in determining compliance or otherwise.

b. Reservation of a discretion to the Council to request further information which also results in uncertainty.

c. The Council not being able to recover the fair and reasonable costs of monitoring compliance with the rule.

d. Not making provision for:

i. Written independently verifiable farm records to enable compliance to be determined by the Council;

ii. Addressing the default values in OVERSEER® if independently verifiable farm records are not provided to the Council;
iii. Farmers to provide a new plan and OVERSEER® evaluation to correct any deficiencies in the information provided to Council;
iv. Updating of a plan when changes to farming operation occur;
v. Compliance monitoring;
vi. What happens when part of a farm is sold?

12.20 As the Court will be well aware, a permitted activity rule must:

a. Be comprehensible to a reasonably informed, but not necessarily expert, person;
b. Not reserve to the Council the discretion to decide by subjective formulation whether existing dairy farming is a permitted activity or not; and
c. Be sufficiently certain to be capable of objective ascertainment.

12.21 In light of the above, in my view the PA rule I have proposed is appropriate for the following reasons:

a. Compliance with a standard or a model, even where that can be subjectively applied, can form the basis of a permitted activity rule (Bodle v Northland Regional Council re compliance with the NZ Standard on Agrichemical use).
b. While OVERSEER® estimates of N loss are subject to variation, it provides adequate certainty because:
    i. The value of Xkg/N/ha/yr is very conservative at the 50% level so that even if the output is understated by 20 - 30% the value will still be below any demonstrable effect
    ii. The rule proposes that it must be done by a trained person.
c. In terms of auditing/verification of OVERSEER® I suggest there are a number of options, such as:
    i. An audit of the Input Parameter Report is done by an accredited contractor and available with the OVERSEER® report if requested by the council; or
    ii. An audit is required to be provided to the council for every alternate year, or just the second year a farmer is in the permitted category; or

iii. The council is entitled to ask for an audit and/or the Input Parameter Report as well as a copy of the OVERSEER® report.

d. No discretion is reserved to the Council;

g. If a budget is calculated but is not complied with, then the issue is one of enforcement. If the failure to comply is significant it may be that enforcement action is taken. For permitted activities compliance can be checked because the OVESEER budgets must be made available to the Council on request.

i. Council can monitor compliance with the management plan should it be concerned that any actually necessary or is the N loss finally modelled the determining factor.

12.22 Cost recovery is adequate through a targeted rate under S150 LGA.

13. CONCLUSION

13.1 The policies and rules (and in particular Policy 6-7; Policy 13-2C and Rule 13-1) are not the most appropriate for achieving the objectives because they are not efficient in their implementation, and are not effective as they will not gain the environmental benefits (in terms of water quality) intended.

13.2 In addition, the cost associated with implementing the regulation appears to outweigh the environmental benefits, and the risk of not acting, or in this case not regulating, seems low.

13.3 I am left with the conclusion that there is no reason why a Permitted Activity rule for dairy farm land use activities for existing and new operations cannot be adopted, and represents good planning practice.

13.4 The concerns raised by Dr Roberts regarding the Natural Capital concept and LUC approach are sufficient enough for a planner to adopt a cautionary/pragmatic approach to addressing water quality issues associated with the leaching of nitrogen, and best practice and the preparation of Nutrient Management Plans is the most appropriate approach.

13.5 The relief sought by Federated Farmers supports the precautionary/pragmatic approach referred to above, and the amended policies and rules are appropriate.

C Hansen

April 2012

Attachment A - SUMMARY OF RAVENSDOWN'S S.274 NOTICE TO BE A PARTY

Ravensdown lodged a s.274 Notice to be party to the following appeals and matters:

- Federated Farmers – the parts of the proceedings and issues Ravensdown is interested in are:
  - Appeal Point 9: Policy 6-7 – Land use activities affecting groundwater and surface water quality. Ravensdown supported the relief sought by Federated Farmers and opposed the use of the Land Use Capability (LUC) to determine nitrogen leaching values on all new dairy conversions within the region.
  - Appeal Point 22: Policy 13-2C – Management of dairy farming land uses. Ravensdown supported the relief sought by Federated Farmers and opposed the reference to LUC in this policy.
  - Appeal Point 24: Table 3.2 – Land use capability, nitrogen leaching/runoff values. Ravensdown supported the relief sought by Federated Farmers and opposed the reference to LUC and Natural Capital in Table 3.2.
  - Appeal Point 25: Rule 13-1 – Existing dairy farming land use activities. Ravensdown supported the proposition that all farming in Rural zones should be a permitted activity.
- Fish & Game - the parts of the proceedings and issues Ravensdown is interested in are:
  - Paragraph 6.11: Policy 6-7 – Land use activities affecting groundwater and surface water quality. Ravensdown opposed the relief sought by Fish & Game and opposed the regulation of all intensive farming activities without the assessment of the environmental effects of individual activities.
  - Paragraph 6.25: Objective 13-1A – Regulation of discharges to land and water. Ravensdown opposed the relief sought by Fish & Game and supported the objective in its current form.
  - Paragraph 6.27: Policy 13-2C – Management of dairy farming land uses. Ravensdown opposed the relief sought by Fish & Game as it will reinstate the requirement to obtain resource consents for all intensive farming activities. Ravensdown considered this is unduly onerous.

- Paragraph 6.29: Table 13.2 – Cumulative nitrogen leaching maximum by LUC class. Ravensdown opposed the relief sought by Fish & Game and opposed the use of LUC in Table 13.2.
- Paragraph 6.30: Rule 13-1 – Rules controlling existing and new dairy farming activities. Ravensdown opposed the reinstatement of Rule 13-1 as originally notified, in particular the control of intensive farming activities and the use of the Farm Applied Resource Management ("FARM") strategy in the rule.

Appendix 'B'

NV - POP

6.4.2.3 Discharges and Land-use Activities Affecting Water Quality

Policy 6-7: Land-use activities affecting surface water quality

(a) **Nutrients**

(i) Intensive farming land-use activities shall be regulated in targeted water management zones*.

(ii) For the purposes of subsection (a)(i), targeted water management 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 zones* targeted in subsection (a)(i) shall be required, amongst other things, to prepare a nutrient management plan for the purposes of:

(1) establishing the measures required to achieve the target contaminant loading rates for the relevant water management zone*, as specified in Schedule D
(2) identifying best management practices
(3) establishing programmes for implementing any required changes.

(b) **Faecal contamination**

(i) Intensive farming land-use activities shall be regulated in targeted water management zones*.

(ii) For the purposes of subsection (b)(i), targeted water management zones* shall be those 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 zones* 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.

DV – POP

6.4.2.3 Discharges and Land use Activities Affecting Water Quality

Policy 6-7: *Land^* use activities affecting groundwater and surface *water^* quality

(a) **Nutrients**

(i) ~~Intensive~~ Existing *dairy farming** *land^* use activities ~~shall~~ must be regulated in ~~targeted~~ specified *Water Management Sub-zones** to achieve nutrient management planning, the exclusion of dairy cattle from some surface *water bodies^* and their *beds^* and the provision of dairy cattle crossings over some *rivers^*.

(ia) New *dairy farming** *land^* use activities must be regulated throughout the Region so as not to exceed nitrogen leaching rates based on the *natural capital** of each *LUC** class of *land^*, and to achieve nutrient management planning, the exclusion of dairy cattle from some surface *water bodies^* and their *beds^* and the provision of dairy cattle crossings over some *rivers^*.

(ii) For the purposes of ~~subsection~~ (a)(i), ~~targeted~~ specified *Water Management Sub-zones** ~~shall be~~ are those *Sub-zones** listed in Table 13.1 where, collectively, ~~intensive~~ *dairy farming** *land^* use activities ~~are the predominant cause of~~ are significant contributors to elevated nutrient levels in groundwater or surface *water^*.

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

~~(1) establishing the measures required to achieve the target contaminant loading rates for the relevant water management zone*, as specified in Schedule D~~

~~(2) identifying best management practices~~

~~(3) establishing programmes for implementing any required changes.~~

(b) **Faecal contamination**

~~(i) Intensive farming land use activities shall be regulated in targeted water management zones*.~~

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

(iii) Those persons carrying out ~~intensive~~ existing *dairy farming** *land^* use activities in the *Water Management Sub-zones** listed in Table 13.1 or new conversions to *dairy farming** anywhere in the Region ~~targeted in subsection (b)(i) shall~~ must be required, amongst other things, to

(1) prevent ~~stock~~ dairy cattle access to some surface *water bodies^* and their *beds^* ~~waterbodies~~

(2) mitigate ~~against~~ faecal contamination of surface *water^* from other entry points (eg., race run-off)

(3) establish programmes for implementing any required changes.

(c) **Sediment**

(i) In those *Water Management Sub-zones** where agricultural *land^* use activities are the predominant cause of elevated sediment levels in surface *water^*, the Regional Council will promote the preparation of voluntary management plans under the Council's Sustainable Land Use Initiative or Whanganui Catchment Strategy ~~non regulatory whole farm business plans shall be prepared and implemented~~ for the purpose of reducing the risk of *accelerated* ~~*soil*~~ *erosion**, as described in Chapter 5.

Appendix 'C'

13.1A Objectives

Objective 13-1: Regulation of *discharges^* to *land^* and *water^*

The regulation of *discharges^* onto or into *land^* (including those that enter *water^*) or directly into *water^* in a manner that:

(a) has regard to the Values and management objectives in Schedule AB,

(b) has regard to the objectives and policies of Chapter 6 as they relate to surface *water^* and groundwater quality, and

(c) where a *discharge^* is onto or into *land^*, avoids, remedies or mitigates adverse *effects^* on surface *water^* or groundwater.

Appendix 'D'

NV - POP

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, wetlands, surface waterbodies, 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, 7, 10 and 11 to the extent that they are relevant to the discharge.

DV - POP

Policy 13-2C: Management of *dairy farming *land^* uses**

When making decisions on *resource consent^* applications, and setting consent conditions^, for *dairy farming** as a *land^* use, the Regional Council must:

(a) have regard to Policy 6-7,

(b) ensure that nitrogen leaching from the *land^* is minimised as far as reasonably practicable for existing *land^* uses,

(c) ensure that nitrogen leaching from new *dairy farming** *land^* uses does not exceed nitrogen leaching rates based on the *natural capital** of each *LUC** class of *land^* used for *dairy farming**, and

(d) ensure that dairy cattle are excluded from surface water^ as far as reasonably practicable.

Appendix 'E'

NV – POP

Table 13.2 Land Use Capability 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)	32	29	22	16	13	10	6	2
Year 5 (kg of N/ ha/year)	27	25	21	16	13	10	6	2
Year 10 (kg of N/ ha/year)	26	22	19	14	13	10	6	2
Year 20 (kg of N/ ha/year)	25	21	18	13	12	10	6	2

DV – POP

Table 13.2 *Cumulative nitrogen leaching maximum** by *Land Use Capability Class** ~~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)~~	~~32~~ 30	~~29~~ 27	~~22~~ 24	~~16~~ 18	~~13~~ 16	~~10~~ 15	~~6~~ 8	2
~~**Year 5** (kg of N/ ha/year)~~	~~27~~	~~25~~	~~21~~	~~16~~	~~13~~	~~10~~	~~6~~	~~2~~
~~**Year 10** (kg of N/ ha/year)~~	~~26~~	~~22~~	~~19~~	~~14~~	~~13~~	~~10~~	~~6~~	~~2~~
~~**Year 20** (kg of N/ ha/year)~~	~~25~~	~~21~~	~~18~~	~~13~~	~~12~~	~~10~~	~~6~~	~~2~~

Attachment 'F'

NV – POP

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	From the dates specified in Table 13.1, the existing use of land in the water management zones specified in Table 13.1 and from the date this rule becomes operative, any new use of land, including conversion, in all water management zones in the Region for: (a) dairy farming* (b) cropping* (c) market gardening* (d) intensive sheep and beef farming* including any of the following activities associated with the above uses: i. the taking and use of surface water ii. the taking and use of not more than 50 m³/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 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 contaminants into air.	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, April 2007). (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 values for each land use capability class (LUC) in Table 13.2 shall be used. 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 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.	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 and 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 (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. 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).

DV – POP

13-1 Existing *dairy farming land^* use activities**	The use of *land^* pursuant to s9(2) RMA for *dairy farming** that was existing as at 1 July 2010 in *the Water Management Sub-zones** listed in Table 13.1 and any of the following *discharges^* pursuant to ss15(1) or 15(2A) RMA associated with *dairy farming**: (a) the *discharge^* of *fertiliser** onto or into *land^* (b) the *discharge^* of *contaminants^* onto or into *land^* from (i) the preparation, storage, use or	**Controlled**	(a) A *nutrient management plan** must be prepared for the *land^*, complied with and provided annually to the Regional Council. (b) Dairy cattle must be excluded from: (i) *wetlands^* and *lakes^* that are a *rare habitat** or *threatened habitat**, *and* (ii) *beds^* of *rivers^* that are permanently flowing or have an *active bed** width greater than 1 m, other than at any specific location where access is required for dairy cattle to cross the *river^* in which case (c) applies.	Control is reserved over: (a) the implementation of reasonably practicable farm management practices for minimising nutrient leaching, faecal contamination and sediment losses from the *land^* (b) the matters of control in Rule 13-6 (c) avoiding, remedying or mitigating the effects of odour, dust, *fertiliser** drift or effluent drift (d) provision of information including the

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	transportation of stock feed on *production land^* (ii) the use of a *feedpad** (c) the *discharge^* of grade Aa, Ab, Ba or Bb *biosolids^*, *soil conditioners** or *compost** onto or into *production land^* (d) the *discharge^* of *poultry farm litter** onto or into *production land^*. (e) the *discharge^* of farm *animal effluent** onto or into *production land^* (or upon expiry or surrender of any existing consent for that *discharge^*) including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent and any ancillary *discharge^* of *contaminants^* into air pursuant to ss15(1) or 15(2A) RMA.		(c) *Rivers^* that are permanently flowing or have an *active bed** width greater than 1 m, that are crossed by more than 1350 dairy cattle movements per week, must be bridged or culverted and run-off originating from the carriageway of the bridge or culvert must be *discharged^* onto or into *land^*. (d) The *discharge^* of *fertiliser** onto or into *land^* and any ancillary *discharge^* of *contaminants^* into air must comply with the *conditions^* of Rule 13-2. (e) The *discharge^* of *contaminants^* onto or into *land^* from: (i) the preparation, storage, use or transportation of stock feed on *production land^*, or (ii) the use of a *feedpad** and any ancillary *discharge^* of *contaminants^* into air must comply with the *conditions^* of Rule 13-3. (f) The *discharge^* of grade Aa *biosolids**, *soil conditioners** or *compost** onto or into *production land^* and any ancillary *discharge^* of *contaminants^* into air must comply with the *conditions^* of Rule 13-4. (g) The *discharge^* of grade Ab, Ba or Bb *biosolids** onto or into *production land^* and any ancillary *discharge^* of *contaminants^* into air must comply with the *conditions^* of Rule 13-4A. (h) The *discharge^* of *poultry farm litter** onto or into *production land^* and any ancillary *discharge^* of *contaminants^* into air must comply with the *conditions^* of Rule 13-4B. (i) The *discharge^* of farm *animal effluent** onto or into *production land^* including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries	*nutrient management plan** (e) duration of consent (f) review of consent *conditions^* (g) 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 need not be *served^* on affected persons).

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
			(iii) sludge from farm effluent ponds (iv) poultry farm effluent and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^, standards and terms of Rule 13-6.	
13-1A Existing *dairy farming *land*^ use activities not complying with Rule 13-1**	The use of *land*^ pursuant to s9(2) RMA for *dairy farming** that was existing as at 1 July 2010 in *the Water Management Sub-zones** listed in Table 13.1, and any of the following *discharges*^ pursuant to ss15(1) or 15(2A) RMA associated with *dairy farming**, that do not comply with one or more of the *conditions*^, standards and terms of Rule 13-1: (a) the *discharge*^ of *fertiliser** onto or into *land*^ (b) the *discharge*^ of *contaminants*^ onto or into *land*^ from (i) the preparation, storage, use or transportation of stock feed on *production land*^ (ii) the use of a *feedpad** (c) the *discharge*^ of grade Aa, Ab, Ba or Bb *biosolids*^, *soil conditioners** or *compost** onto or into *production land*^ (d) the *discharge*^ of *poultry farm litter** onto or into *production land*^ (e) the *discharge*^ of farm *animal effluent** onto or into *production land*^ (or upon expiry or surrender of any existing consent for that *discharge*^) including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(1) or 15(2A) RMA.	**Restricted Discretionary**		Discretion is restricted to: (a) preparation of a *nutrient management plan** for the *land*^ (b) the implementation of reasonably practicable farm management practices for minimising nutrient leaching, faecal contamination and sediment losses from the *land*^ (c) measures to exclude dairy cattle from *wetlands*^ and *lakes*^ that are a *rare habitat** or *threatened habitat**, and *rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m (d) the bridging or culverting of *rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m that are crossed by dairy cattle (e) the matters referred to in the *conditions*^ of Rules 13-2, 13-3, 13-4, 13-4A and 13-4B (f) the matters referred to in the *conditions*^ of Rule 13-6 and the matters of control in Rule 13-6 (g) avoiding, remedying or mitigating the effects of odour, dust, *fertiliser** drift or effluent drift (h) provision of information including the

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
				annual *nutrient management plan** (i) duration of consent (j) review of consent conditions^ (k) compliance monitoring.
13-1B New *dairy farming *land*^ use activities**	The use of *land*^ pursuant to s9(2) RMA for any conversion to *dairy farming** that occurs after 1 July 2010 anywhere within the Region and any of the following *discharges*^ pursuant to ss15(1) or 15(2A) RMA associated with *dairy farming**: (a) the *discharge*^ of *fertiliser** onto or into *land*^ (b) the *discharge*^ of *contaminants*^ onto or into *land*^ from (i) the preparation, storage, use or transportation of stock feed on *production land*^ (ii) the use of a *feedpad** (c) the *discharge*^ of grade Aa, Ab, Ba or Bb *biosolids*^, *soil conditioners** or *compost** onto or into *production land*^ (d) the *discharge*^ of *poultry farm litter** onto or into *production land*^ (e) the *discharge*^ of farm *animal effluent** onto or into *production land*^ including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent	**Controlled**	(a) A *nutrient management plan** must be prepared for the *land*^, complied with and provided annually to the Regional Council. (b) The *nutrient management plan** must demonstrate compliance with the *cumulative nitrogen leaching maximum** for the *land*^ used for *dairy farming**. (c) Dairy cattle must be excluded from: (i) *wetlands*^ and *lakes*^ that are a *rare habitat** or *threatened habitat**, and (ii) *beds*^ of *rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m, other than at any specific location where access is required for dairy cattle to cross the *river*^ in which case (d) applies. (d) *Rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m, that are crossed by more than 1350 dairy cattle movements per week, must be bridged or culverted and run-off originating from the carriageway of the bridge or culvert must be *discharged** onto or into *land*^. (e) The *discharge*^ of *fertiliser** onto or into *land*^ and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 13-2. (f) The *discharge*^ of *contaminants*^ onto or into *land*^ from: (i) the preparation, storage, use or transportation of stock feed on *production land*^, or	Control is reserved over: (a) the implementation of farm management practices to maintain compliance with the *cumulative nitrogen leaching maximum** for the *land*^. (b) the implementation of reasonably practicable farm management practices for minimising nutrient leaching, faecal contamination and sediment losses from the *land*^. (c) the matters of control in Rule 13-6 (d) avoiding, remedying or mitigating the effects of odour, dust, *fertiliser** drift or effluent drift (e) provision of information including the *nutrient management plan** (f) duration of consent (g) review of consent conditions^ (h) 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 need not be served^ on affected persons).

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(1) or 15(2A) RMA.		(ii) the use of a *feedpad** and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 13-3. (g) The *discharge*^ of grade Aa *biosolids**, *soil conditioners** or *compost** onto or into *production land*^ and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 13-4. (h) The *discharge*^ of grade Ab, Ba or Bb *biosolids** onto or into *production land*^ and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 13-4A. (i) The *discharge*^ of *poultry farm litter** onto or into *production land*^ and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^ of Rule 13-4B. (j) The *discharge*^ of farm animal *effluent** onto or into *production land*^ including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent and any ancillary *discharge*^ of *contaminants*^ into air must comply with the *conditions*^, standards and terms of Rule 13-6.	
13-1C New *dairy farming** *land*^ use activities not complying with Rule 13-1B	The use of *land*^ pursuant to s9(2) RMA for *dairy farming** that occurs after 1 July 2010 anywhere within the Region, and any of the following *discharges*^ pursuant to ss15(1) or 15(2A) RMA associated with *dairy farming**, that do not comply with one or more of the *conditions*^, standards and terms of Rule 13-1B: (a) the *discharge*^ of *fertiliser** onto or into	Restricted Discretionary		Discretion is restricted to: (a) preparation of a *nutrient management plan** for the *land*^. (b) the implementation of reasonably practicable farm management practices for maintaining compliance with the *cumulative nitrogen leaching maximum** for the *land*^

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-Notification
	land^ (b) the *discharge*^ of *contaminants*^ onto or into *land*^ from (i) the preparation, storage, use or transportation of stock feed on *production land*^. (ii) the use of a *feedpad** (c) the *discharge*^ of grade Aa, Ab, Ba or Bb *biosolids**, *soil conditioners** or *compost** onto or into *production land*^ (d) the *discharge*^ of *poultry farm litter** onto or into *production land*^. (e) the *discharge*^ of farm animal *effluent** onto or into *production land*^ including: (i) effluent from dairy sheds and *feedpads** (ii) effluent received from piggeries (iii) sludge from farm effluent ponds (iv) poultry farm effluent and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(1) or 15(2A) RMA.			(c) the implementation of reasonably practicable farm management practices for minimising nutrient leaching, faecal contamination and sediment losses from the *land*^. (d) measures to exclude dairy cattle from *wetlands*^ and *lakes*^ that are a *rare habitat** or *threatened habitat**, and *rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m (e) the bridging or culverting of *rivers*^ that are permanently flowing or have an *active bed** width greater than 1 m that are crossed by dairy cattle (f) the matters referred to in the *conditions*^ of Rules 13-2, 13-3, 13-4, 13-4A and 13-4B (g) the matters referred to in the *conditions*^ of Rule 13-6 and the matters of control in Rule 13-6 (h) avoiding, remedying or mitigating the effects of odour, dust, *fertiliser** drift or effluent drift (i) provision of information including the annual *nutrient management plan** (j) duration of consent (k) review of consent *conditions*^ (l) compliance monitoring.

Attachment 'G'

Permitted Activity Rule

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-notification
13-1A All *dairy farming** *land*^ use activities	The use of *land*^ pursuant to s9(2) RMA for *dairy farming** and associated land use activities.	Permitted	The following conditions/standards/terms apply only to those dairy farms located within the Water Management Sub-Zones listed in Table 13.1: (a) A nutrient budget must be prepared and able to be provided annually by 30 September to the Regional Council. The activity must be operated in accordance with the nutrient budget parameters. (b) The nutrient budget referred to in condition (a) above, must demonstrate that the nitrogen leaching loss will not exceed X kgN/ha/year. A nutrient management plan may be required to demonstrate compliance. (c) OVERSEER® shall be used to calculate the average annual kg nitrogen loss per hectare in the soil drainage water from the land. (d) A record of the OVERSEER® calculation, including the information used in the calculation, shall be: (i) prepared by the 30th of September each year; and (ii) certified as an accurate record by a person who can demonstrate competency in agricultural nutrient management; and (iii) maintained for the property for a period of 7 years, and (iv) made available to Horizons on request. (e) When there is a change in ownership of a property where land use is subject to this Rule, the records or	

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-notification
			a copy of the records of the calculations required under Condition (d) shall be provided to the new owner at the time the ownership is transferred.	
13-1B All *dairy farming** *land*^ use activities	The use of *land*^ pursuant to s9(2) RMA for *dairy farming** and associated land use activities that do not comply with one or more of the *conditions*^, standards and terms of Rule 13-1A.	Controlled	The following conditions/standards/terms apply to those dairy farms located within the Water Management Sub-Zones listed in Table 13.1: (a) A nutrient budget must be prepared and able to be provided annually by 30 September to the Regional Council. The activity must be operated in accordance with the nutrient budget parameters. (b) The nutrient budget referred to in condition (a) above, must demonstrate that the nitrogen leaching loss may be greater that X kgN/ha/year but will not exceed Y kgN/ha/year. A nutrient management plan will be required to demonstrate compliance. (c) OVERSEER® shall be used to calculate the average annual kg nitrogen loss per hectare in the soil drainage water from the land. (d) If the average annual kg nitrogen loss per hectare, calculated in accordance with Condition (c), exceeds Y kgN/ha/year, reasonably practicable management practices shall be implemented to minimise, as far as practicable, the discharge of nitrogen. (e) A record of the OVERSEER® calculation, including the information used in the calculation, shall be: (i) prepared by the 30th of September each year; and (ii) certified as an accurate	Where the average annual kg nitrogen loss per hectare exceeds Y kgN/ha/year (Condition (d)), Council will control its discretion to requiring measures that are 'reasonably practicable' in relation: (a) Management practices to avoid or minimise the discharge of nitrogen from the use of land (b) The method of calculating N loss (c) Monitoring of management practices (d) Review of consent conditions 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
			record by a person who can demonstrate competency in agricultural nutrient management; and (iii) maintained for the property for a period of 7 years, and (iv) made available to Horizons on request. (f) When there is a change in ownership of a property where land use is subject to this Rule, the records or a copy of the records of the calculations required under Condition (e) shall be provided to the new owner at the time the ownership is transferred.	
13-2 *Fertiliser**	The *discharge*^ of *fertiliser** onto or into *land*^ pursuant to ss15(1) or 15(2A) RMA and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(1) or 15(2A) RMA, except where the *discharge*^ is undertaken in association with a use of *land*^ controlled by Rules 13-1 to 13-1C.	Permitted	(a) There must be no direct *discharge*^ of *fertiliser** into any surface *water body*^ or its *bed*^ or *artificial watercourse** other than as provided for under (ba). (ba) All reasonable measures must be taken to prevent: (i) any *discharge*^ of *fertiliser** within the *bed*^ of a *river*^ that is permanently flowing or has an *active bed** width greater than 2 m, or any *lake*^ or *wetland*^ that has an area of 1 ha or more (ii) any *discharge*^ into any *rare habitat**, *threatened habitat** or *at-risk habitat**, except for the purpose of enhancing such habitats. Under condition (ba) "reasonable measures" includes the use of GPS technology. (b) For *production land*^ the *fertiliser** must be	

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-notification
			discharged^ in accordance with the Code of Practice for Nutrient Management (New Zealand Fertiliser Manufacturers' Research Association, 2007). (c) Where nitrogen *fertiliser** is *discharged*^ onto *land*^ in excess ~~of an average rate~~ of 60 kgN/ha/year averaged across ~~the grazed or cropped area of~~ a whole farm area or in excess of an average rate of 150 kgN/ha/year on any application area a nutrient budget undertaken using the OVERSEER® model, which takes into account all other sources of nitrogen, and covers and identifies the whole farm area including details of individual blocks and which is designed to minimise nitrogen leaching rates, must be used to plan and carry out the *fertiliser** *discharge*^ and be made available to the Regional Council upon request. If a *nutrient management plan** is required under Rules 13-1, 13-1A, 13-1B or 13-1C then the nutrient budget required by this *condition*^ must be consistent with it and the activity must be carried out in accordance with it. (d) The *discharge*^ must not result in any offensive or objectionable odour or *fertiliser** drift beyond the *property** boundary.	
13-4 *Discharges*^ of *grade Aa biosolids**, *soil conditione*	The *discharge*^ of *grade Aa biosolids**, *soil conditioners** or *compost** onto or into *production land*^ pursuant	Permitted	(a) There must be no direct *discharge*^ or run-off into any surface *water body*^ or its *bed*^ or *artificial watercourse**. (c) For *soil conditioners** and *compost** the material must not contain any human or animal	

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-notification
*rs** and *compost** to *production land*^	to ss15(1) or 15(2A) RMA, and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(1) or 15(2A) RMA, except where the *discharge*^ is undertaken in association with a use of *land*^ controlled by Rules 13-1 to 13-1C.		pathogens, or any *hazardous substances**. (ca) For *grade Aa biosolids** the *discharge*^ must comply with the requirements for *grade Aa biosolids** as included with Chapters 4 and 7 of Volume 1 and Chapters 8 (including monitoring requirements) and 9 of Volume 2 of the Guidelines for the Safe Application of Biosolids to Land in New Zealand (New Zealand Water and Waste Association, August 2003). (d) The *discharge*^ must comply with the following separation distances: (iii) 50 m from *rare habitats**, *threatened habitats** and *at-risk habitats** (iv) 20 m from *bores**, surface *water bodies*^, *artificial watercourses** and the *coastal marine area*^ (v) 50 m from any *historic heritage*^ identified in any *district plan*^ or *regional plan*^. (e) A nutrient budget undertaken using the OVERSEER® model, which takes into account all other sources of nitrogen and which is designed to minimise nitrogen leaching rates, must be used to plan and carry out the *discharge*^ of the *grade Aa biosolids**, *soil conditioner** or *compost**. If a *nutrient management plan** is required under Rules 13-1 to 13-1C then the nutrient	

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-notification
			budget required by this *condition*^ must be consistent with it and the activity must be carried out in accordance with it. (f) The *discharge*^ must not result in any offensive or objectionable odour or dust beyond the *property** boundary. (g) The discharger must 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.	
13-4A Grade Ab, Ba or Bb *biosolids**	The *discharge*^ of grade Ab, Ba or Bb *biosolids** onto or into *production land*^ pursuant to ss15(1) or 15(2A) RMA, and any ancillary *discharge*^ of *contaminants*^ into air pursuant to ss15(2) or 15(2A) RMA, except where the *discharge*^ is undertaken in association with a use of *land*^ controlled by Rules 13-1 to 13-1C.	Restricted Discretionary	(a) There must be no direct *discharge*^ or run-off into any surface *water body*^ or its *bed*^ or *artificial watercourse**. (b) The material must have undergone stabilisation processes to achieve at least B grade as defined by the Guidelines for the Safe Application of Biosolids to Land in New Zealand (New Zealand Water and Waste Association, August 2003). *Hazardous substances** must not exceed b grade limits as given by the Guidelines for the Safe Application of Biosolids to Land in New Zealand (New Zealand Water and Waste Association, August 2003). (c) The *discharge*^ must comply with the following separation distances: (i) 150 m from	Discretion is reserved over: (a) the rate of discharge^ and frequency of discharge^ to control nutrient and contaminant loading rates (b) maintenance of vegetative cover in the area of discharge^ (c) avoiding, remedying or mitigating the effects of odour or dust (d) contingency measures, including for events of mechanical failure and prolonged wet weather (e) monitoring and information requirements (f) duration of consent (g) review of consent conditions^, and compliance monitoring.

Rule	Activity	Classification	Conditions/Standards/Terms	Control/Discretion Non-notification
			residential buildings, public places and amenity areas where people congregate, education facilities and public roads (ii) 50 m from *property** boundaries (iii) 50 m from *rare habitats**, *threatened habitats** and *at-risk habitats** (iv) 20 m from *bores**, surface *water bodies*^, *artificial watercourses** and the *coastal marine area*^ (v) 50 m from any *historic heritage*^ identified in any *district plan*^ or *regional plan*^. (d) A nutrient budget undertaken using the OVERSEER® model, which takes into account all other sources of nitrogen and which is designed to minimise nitrogen leaching rates, must be used to plan and carry out the *biosolids** *discharge*^. If a *nutrient management plan** is required under Rules 13-1 to 13-1C then the nutrient budget required by this *condition*^ must be consistent with it and the activity must be carried out in accordance with it. (e) The *discharge*^ must not result in any offensive or objectionable odour or dust beyond the *property** boundary.	

Proposed Advisory Note

Advisory Notes for Rules 13-1A – 13-1B:

[To cover:]

- Certification for OVERSEER® – reference certification process

- OVERSEER® is a registered trademark, jointly owned by MAF, FertResearch and AgResearch Ltd.
- Cost recovery of fair and reasonable costs of monitoring compliance with Rules 13-1A – 13-1B through s.150 of LGA

Proposed Wording for Explanation and reasons:

Explanation and reasons:

The Regional Council wishes to address the effects of nitrogen leaching in associated with all dairy farming* and associated land use activities, particularly in catchments or sub-catchment where water quality in waterways is degraded and needs to be improved. The Regional Council acknowledges that further work is required to identify the actual level of effect, and the priority catchments or sub-catchments where regulations are required. Policy 13-2C identifies that the Regional Council will introduce by way of a plan change further regulation in these areas within 5 years of this plan becoming operative.

In the interim, some level of control, with the overall objective being to reduce nitrogen leaching rates across the region, is appropriate. The intention of Rules 13-A to 13-1B is that dairy farm operators, over time, adopt land use practices which reduce or minimise the rate of nitrate-nitrogen leaching in soil drainage water. The rule is not prescriptive; it allows a flexible approach to the management of nitrogen. Dairy farm operators can adapt land use practices to meet their own particular circumstances. Some dairy farm operations and associated activities will, under existing management practices, result in high rates of nitrate-nitrogen leaching, which is likely to be adversely affecting water quality. These rates should be able to be reduced through the implementation of improved management practices.

When determining what is an appropriate point at which to control of nitrogen leaching should be exercised, the Regional Council has used the data available from FertResearch/DairyNZ which has been prepared by …. For the Manawatu Wanganui Region, the following summarises the Dairy NZ findings:

- 70% of all dairy farms produce less than Y kgN/ha/year
- 50% of all dairy farms produce less than X kgN/ha/year

Rule 13-1A … nutrient management plan; OVERSEER®; below X kgN/ha/year as permitted.

Rule 13-1B … nutrient management plan; OVERSEER®; between X and Y kgN/ha/year as controlled.

The effectiveness of these rules will be dependent upon the accuracy of the information used to calculate the leaching rate. The calculation of nitrogen loss is to be prepared annually and is available to be submitted to the Regional Council by 30 September if required. Therefore, the conditions require that the accuracy of the information used to calculate the nitrogen loss each year is certified by a qualified person. Farm management advisers, fertiliser company representatives or land managers trained in agricultural nutrient management would be qualified to certify the method used to calculate the nitrogen loss. Records of the calculations need to be retained so that comparisons can be made between annual calculations, and passed to succeeding land owners.

OVERSEER® is considered to be the most appropriate method for determining the nitrogen leaching rate to be included in the nutrient budget. While the Regional Council acknowledges there are limitations regarding inputs and assumptions used and the ability of the dairy farm operator to adjust practices during the year to achieve the nitrogen leaching rate, ensuring OVERSEER® is prepared by a suitably qualified person, and allowing for the independent auditing of inputs and assumptions used will minimise this limitation. The Regional Council notes that the use of the OVERSEER® approach has been successfully adopted in the Canterbury and Waikato regions.

The Regional Council also believes that there are economic incentives that mean dairy farm operators are seeking ways to reduce nitrogen leaching. Using the OVERSEER® modelling and the preparation of a nutrient management plan where required to gain economic efficiencies will also have environmental benefits.

Policy Amendments to Facilitate Above Approach

Policy 13-2C: Management of dairy farming* and associated land^ uses

When making decisions on resource consent^ applications, and setting consent conditions^, for dairy farming* as a land^ use, the Regional Council must:

(a) Give effect have regard to Policy 6-7, and

(b) Seek to exclude dairy cows from the following waterbodies within the water management sub-zones* listed in Table 13.1:

(i) A wetland or lake that is a rare habitat*, threatened habitat* or at risk habitat*.

(ii) A river that is permanently flowing, or is intermittently flowing with an active bed* width greater than 1 metre (when measured as an average across the property) at any time the bed contains water.

For the purposes of this policy “exclude” means stock access must be restricted to the waterbody* by any permanent or temporary fence or barrier or any natural barrier. Where there are more than 1350 stock movements per week across a river identified in (b)(ii) then a culvert or bridge shall be installed and used.

Dairy Farming* and associated land^ uses

(c) Ensure that nitrogen leaching from the land^ within the Water Management Sub-Zones (Table 13.1) is minimised as far as reasonably practicable for dairy farming* and associated land^ uses does not exceed nitrogen leaching rates on an annual basis in a nutrient budget prepared using OVERSEER®. Where achievement of the nitrogen leaching rate maximum for permitted activity status is not immediately possible then:

(i) The nitrogen leaching loss from the farm will require a controlled activity consent when it is between X kgN/ha/year and Y kgN/ha/year; and

Dairy farms on land outside areas listed in Table 13.1 are permitted activities.

This will mean that the overall N loss levels that are within the permitted and "lightly regulated" categories are reduced. If there has been no reduction, then it is anticipated that the Council will lower the X values.

In relation to the exception identified in (c)(i) consent conditions will require:

i. The Regional Council will encourage the use of good practice in dairy farming and associated land use activities and practices that minimise the loss of nitrogen. The Regional Council will, in conjunction with organisations and industry groups, provide guidance in the development, implementation and review of good practice guidelines and codes of practice for land use activities which cause non-point source discharges.

(e) In relation to Rules 13-1B reasonably practicable dairy farm management practices for minimising nutrient leaching from the land^ include but are not limited to:

(i) Herd homes and effluent capture;

(ii) Winter feed pads and effluent capture;

(iii) Low nitrogen feeds;

(iv) Replace nitrogen fertiliser with equivalent supplements;

(v) Graze animals off-farm over the winter months;

(vi) Reducing stock rate;

(vii) Best management (amount and timing and land area) of nitrogen fertiliser inputs;

(viii) Management of infrastructure (e.g. reducing leaks in effluent irrigation systems and lining of effluent ponds and feedpads);

(ix) Nitrogen inhibitors;

(x) Non-pastoral land use; and

(xi) Creation of wetland and riparian zones.

The implementation of reasonably practicable farm management practices to reduce nitrogen leaching must achieve the nitrogen leaching rates for in accordance with the nutrient budgets using OVERSEER®.

The Council has not done adequate technical work to justify the proposed regime on all catchments within the region. The Council should undertake more work to determine actual levels of effect in identified catchments and sub catchments. That work might lead to the identification of priority catchments or sub catchments (such as has been done for Taupo in the Waikato) and appropriate regulation of activities through a plan change process.

While this is being done (say over the next 5 years) it is accepted that some level of control within the sub-catchments listed in Table 13.1 (page 13-6 of the 21/12/11 version), with the overall objective of reduction in nitrogen loss (N loss) across the region, is appropriate.

Other initiatives the Regional Council will promote to implement Policy 13-2C include:

(g) The Regional Council will, through environmental education programmes, raise the awareness within the community about appropriate dairy farm and associated land management practices and streamside management. In particular, regarding:

- The positive effects of enhanced streamside management as a means of mitigating adverse effects on water quality and aquatic ecosystems;
- The exclusion of livestock from the beds and banks of water bodies;
- The fencing of streamside areas;
- The effects of land use on ground water quality and the promotion of well head protection;

- Methods of fertiliser use and application that minimise adverse effects on water quality and aquatic ecosystems;
- Appropriate plants for enhancing riparian areas and pest control techniques for animal and plant pests.

(h) In addition to the investigations to determine priority catchments and sub-catchments, the Regional Council will carry out a risk-based analysis to identify riparian areas and water bodies which are particularly sensitive to land use effects such as sediment and faecal material entering water, and establish priority areas to encourage and implement good practice with regard to streamside management.