

**IN THE MATTER** of the Resource Management Act  
1991

**AND**

**IN THE MATTER** of the Proposed Canterbury Land  
and Water Regional Plan

**STATEMENT OF EVIDENCE OF GERARD MATTHEW WILLIS  
FOR THE GROUP 1 HEARING**

**1. INTRODUCTION**

- 1.1 My full name is Gerard Matthew Willis. I am a director of Enfocus Ltd, a resource management consultancy based in Auckland. I have practiced as a planner and resource management specialist for the past 23 years.
- 1.2 I hold a Bachelor of Regional Planning (Hons) degree from Massey University and am a full member of the NZ Planning Institute.
- 1.3 My previous experience includes working in policy and regulatory planning roles in local government both in New Zealand and in the United Kingdom. Shortly after the enactment of the Resource Management Act 1991 (*RMA*) I joined the Ministry for the Environment (*MfE*) as a regional environmental analyst advising local authorities on the preparation of “first generation” district and regional plans.
- 1.4 Over the period 1995 to 1999, I was environment adviser to the Minister for the Environment. In that role I had close involvement in issues across the environmental portfolio including, in particular, energy and climate change, freshwater management and amendments to the RMA.
- 1.5 Since 2001, I have been a planning and resource management consultant, establishing my own practise in 2002. In that capacity I have acted for a number of district and regional councils, public and private companies and

government agencies. The scope of consulting commissions has been broad ranging. Of note, over recent years, I have advised three different regional councils on the development of regional policy statements and/or regional plans.

- 1.6 I have also been involved in reform of freshwater management at the national level having been previously engaged by MfE under the Sustainable Water Programme of Action to advise on alternatives to first-in-first served allocation regimes and on barriers to tradable permits. In 2010 I was engaged by MfE to assist in the New Start for Freshwater Programme with specific involvement in water governance issues.
- 1.7 My relevant experience also involves the preparation of evidence for hearings in relation to water quantity and/or quality matters in respect of Horizons One Plan, Variation 6 to Environment Waikato's Regional Plan, Proposed Change 6A to the Otago Regional Plan and, in Canterbury, the Proposed Hurunui and Waiou Rivers Regional Plan.
- 1.8 Although this is not a Court hearing, I have read the Environment Court's Code of Conduct for Expert Witnesses, and I agree to comply with it. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise, except where I state I am relying on what I have been told by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.
- 1.9 I am familiar with the Proposed Land and Water Regional Plan (*the Plan*) to which these proceedings relate.

## **2. SCOPE OF EVIDENCE**

- 2.1 This evidence provides a planning assessment of those provisions on which Fonterra and/or DairyNZ submitted that fall within the Hearing Group 1 category as described in the Schedule of Hearing Topics provided by the Commissioners.
- 2.2 More particularly this evidence provides an overview of the relevant planning instruments and an evaluation of the following:

- (a) The completeness of the Objectives of Section 3;
- (b) The appropriateness of the Strategic Policies of Section 4 (including Policy 4.10 and Tables 1a, 1b and 1c and Policy 4.6);
- (c) Selected provisions relating to Water Takes (Policies 4.46, 4.47, 4.52, 4.53, 4.61, 4.73, 4.76 and Rules 5.97, 5.102, 5.107);
- (d) Discharge Policy 4.11 and Discharge Rule 5.70.

2.3 Although some of this evidence relates to Farming and nutrient management the bulk of planning evidence on those matters will be provided in Hearing Group 2.

### **3. THE PLANNING FRAMEWORK**

3.1 The relevant planning documents that the Plan must give effect to<sup>1</sup> are:

- (a) The National Policy Statement for Freshwater Management (NPSFM);
- (b) The New Zealand Coastal Policy Statement (NZCPS);
- (c) The National Policy Statement on Renewable Energy (NPSRE); and
- (d) The Operative Regional Policy Statement 1998.

3.2 The relevant planning documents that the Plan must not be inconsistent with<sup>2</sup> are:

- (a) All operative regional plans<sup>3</sup> (excepting those, or those parts, that are to be replaced by the Plan);
- (b) The Water Conservation (Rakaia River) Order 1988;
- (c) The Water Conservation (Rangitata River) Order 2006; and

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1. In accordance with Section 67 (3) of the RMA.  
 2. In accordance with Section 67 (4) of the RMA.  
 3. The Natural Resources Regional Plan, Waipara Catchment Environmental Flow and Water Allocation Regional Plan; Waimakariri River Regional Plan; Opihi River Regional Plan; Pareora Catchment Environmental Flow and Water Allocation Regional Plan; and the Waikati Catchment Water Allocation Regional Plan.

- (d) The National Water Conservation (Ahuriri River) Order 1990.
- 3.3 The relevant planning documents that the Plan must have particular regard to<sup>4</sup> are:
- (a) The Vision and Principles of the Canterbury Water Management Strategy (CWMS).
- 3.4 The relevant planning documents that the Plan must have regard to<sup>5</sup> are:
- (a) Proposed Regional Policy Statement 2012 (now operative); and
- (b) Management Plans prepared under other Acts (including the Nelson Marlborough, North Canterbury and Central South Island Fish and Game Management Plans – 2011, 2011 and 1999 respectively).
- 3.5 The relevant planning documents that the Plan must take into account<sup>6</sup> to are:
- (a) Te Rununga o Kaikoura Environmental Management Plan; and
- (b) Ngai Tahu Freshwater Policy.
- 3.6 In setting out these documents I broadly agree with the analysis set out in Section 3.3 of Appendix 1 of Environment Canterbury's Section 32 Report dated 26 July 2012 and the analysis of the CWMS and the RPS in the Section 42A Report.
- 3.7 Rather than repeat the analysis of the applicability of those planning instruments or the Plan's compliance with those instruments, I simply set out throughout this evidence where I depart from the views expressed in the Section 32 or Section 42A Reports or consider that an alternative planning provision would better give effect to, be not inconsistent with, or have regard to (as the case may be) the various relevant documents.
- 3.8 The exception to this general approach is the following section on the NPSFM. In my opinion this is the most relevant document (in conjunction with the RPS)

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4. In accordance with Section 63 of the Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010.

5. In accordance with Section 66 (2) of the RMA.

6. In accordance with Section 66 (2A) (a) of the RMA.

in terms of the issues raised by Fonterra and DairyNZ and it is important at the outset of this evidence to outline my understanding of the instrument as it forms the basis of the analysis that follows.

### **National Policy Statement on Freshwater Management**

3.9 As the NPSFM is being bedded into regional plans a number of planning issues have emerged. Key to the consideration of whether the Plan gives effect to the NPSFM are two such issues.

### **Objective A2 – “Overall” Quality of Freshwater**

3.10 The first relates to Objective A2, which states:

*The overall quality of fresh water within a region is maintained or improved while:*

- a) *protecting the quality of outstanding freshwater bodies*
- b) *protecting the significant values of wetlands and*
- c) *improving the quality of fresh water in water bodies that have been degraded by human activities to the point of being over-allocated.*

3.11 In my opinion, Objective A2 needs to be read in its entirety. In that way it suggests to me that:

- (a) “Outstanding water bodies” need to be protected (which I read to mean that quality needs to be maintained in an absolute sense), as do the significant values of wetlands.
- (b) Degraded water bodies need to be improved.
- (c) The remaining water bodies (i.e. those that are neither “outstanding” nor “degraded”, leaving aside for the moment the question of wetlands) need to be managed so that, taking into account what has been protected and what has been improved, cumulatively water bodies of the planning area are at least as good as before the management intervention. It does not, in my reading, mean that every individual water body needs to be maintained or improved provided:
  - (i) the absolute imperatives of a) –c) are met; and

- (ii) the net effect of any change in state in the collective quality of water bodies not falling within a)–c) or reaches of a river is neutral or positive in water quality terms.

3.12 In my opinion, that does mean that the improvement of a degraded river might offset a reduction in the quality in another river (or, more likely, a particular reach of river). This overall judgement of “no net negative change” will for all practical purposes, need to be made in the context of the plan under consideration (rather than anticipating what might be achieved by some other catchment plan subject to a different process).

3.13 That interpretation focuses on recognising the potential for spatial variation. However, Objective A2 refers to the overall quality of *freshwater* not of freshwater bodies. Hence it is not necessarily just a simple trade-off of one water body for another. The question of volume/flow may also be relevant. For example, the overall quality of freshwater may be improved if the quality in the mainstem of a river is improved even though the quality of a particular tributary deteriorates. That is simply a function of there being a great deal more freshwater flowing in the mainstem than in the particular tributary. In such a case, more water is improved than deteriorates meaning that, in volumetric terms, overall water quality has improved.

3.14 Finally, it is also appropriate, in my opinion, to consider the “overall” test in terms of various aspects of water quality. The above analysis should not be read as saying that some water bodies can be traded away entirely with no regard to existing values and interests. Clearly that is not the case. I see Objective A1 as a “bottomline” safeguard against excessive trade-offs. But equally the “overall quality of freshwater” is determined by the presence of a range of contaminants and in-stream conditions. In that sense I consider it possible, in the overall judgement to be made, for a plan to give effect to this objective by allowing one contaminant to increase (say Dissolved Inorganic Nitrogen - DIN) while achieving an overall improvement in water quality by securing a decrease in (for example) microbial pollution (e.g. E.coli) and sediment. Indeed such an outcome might allow a water body previously unsuitable for swimming to become suitable for that purpose.

3.15 In that sense I understand the overall test of Objective A2 to potentially work at three levels and the question of whether a plan gives effect to it is not, therefore, straightforward. Rather, it requires careful and balanced consideration of the full effect of a plan.

3.16 My understanding is consistent with the advice provided in the NPSFM Implementation guide<sup>7</sup>, which states (at page 12):

*Objective A2 recognises that a bottom line of at least maintaining all aspects of water quality everywhere is not possible.*

### **Policies A1 and A2 - Managing freshwater objectives and to limits**

3.17 The NPSFM requires (in Policy A1) that regional councils set freshwater objectives and freshwater quality limits. The relationship between objectives and limits is, in my opinion, critical to the proper application of the NPSFM.

3.18 Policy A1 states:

*By every regional council making or changing regional plans to the extent needed to ensure the plans:*

- a) *establish freshwater objectives and set freshwater quality limits for all bodies of fresh water in their regions to give effect to the objectives in this national policy statement, having regard to at least the following:*
  - i) *the reasonably foreseeable impacts of climate change*
  - ii) *the connection between water bodies*
- b) *establish methods (including rules) to avoid over-allocation.*

3.19 In my opinion the NPSFM requires councils to manage to freshwater objectives (and/or limits). This can be seen in the definition of the term “over-allocation”. That definition is critical because Policy A1 (b) requires plans to establish methods (including rules) to avoid over-allocation.

3.20 The NPSFM's definition of over-allocation is as follows:

*Over-allocation is the situation where the resource:*

- a) *has been allocated to users beyond a limit or*

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7. National Policy Statement for Freshwater Management 2011: Implementation Guide, Ministry for the Environment 2011.

- b) *is being used to a point where a freshwater objective is no longer being met.*

*This applies to both water quantity and quality.*

- 3.21 It is clear from this definition that the NPS anticipates a situation when a limit might be exceeded but the objective is not compromised and makes clear that such a situation would still constitute “over-allocation”.
- 3.22 The key point though is that, in planning terms, it would seem good practice to avoid that situation arising. If a limit is breached but an objective is still met, the plan is likely to be inefficient (limits must be too stringently set given the outcome intended). The cost of the provision will therefore be greater than it needs to be to achieve the outcome sought. My understanding is that that is the definition of “inefficient regulation” which should, as a matter of good practice, be avoided.
- 3.23 The NPSFM itself, attempts to ensure the situation described in paragraph 3.21 above does not arise since it defines a limit as “*the maximum amount of resource use available, which allows a freshwater objective to be met*”. Thus, although over-allocation *can* occur when a limit is breached but an objective is still met, it *ought* not happen since, by definition, the limit in that situation has not specified the “*maximum* amount of resource available that allows for a freshwater objective to be met” but something less than the maximum.
- 3.24 This is highly relevant to managing dairying and to managing nutrients (especially diffuse nutrient discharges).
- 3.25 The opportunity cost of setting limits higher than they need be to meet freshwater objectives is significant when the result is foregone dairy conversion (this will be discussed in the evidence of Mr Butcher for the Group 2 hearings<sup>8</sup>).
- 3.26 The point made here is particularly relevant to nutrient management because there is often not a direct relationship between nutrient limits set and an in-stream outcome that will be achieved. Many factors will come into play in determining whether the desired outcome will be achieved. Hence great care is required in setting limits for nutrients that are consistent with the NPSFM’s

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8. Mr Butcher (in his Group 2 evidence) estimates that 5000ha of dairy conversion would result in an increase in on farm value added of \$20 million (per year) and a increase in regional GDP of \$46 million (per year).



definition, and which do not unnecessarily result in water bodies becoming “over-allocated” under the NPSFM without achieving a positive environmental outcome, in the broadest sense.

- 3.27 This point is relevant to the discussion of objectives in this evidence and more particularly to the consideration of the Red Zones and the non-complying status of land use change that is proposed to apply in that zone. I will address the latter matters in detail in the Group 2 hearing.

### **Setting Freshwater Objectives**

- 3.28 A Freshwater Objective is defined by the NPSFM as:

*Freshwater objective describes the intended environmental outcome(s).*

- 3.29 The Ministry for the Environment’s NPSFM Implementation Guide describes a freshwater objective as follows:

*A freshwater objective is the environmental outcome sought for the waterbody. This describes the environmental state required to enable community values and wishes to be achieved....*

*In determining community objectives, the list of national values of freshwater set out in the preamble (and in Appendix B) is relevant.*

- 3.30 The implementation guide confirms that a freshwater objective is an environmental outcome, with the term “environmental” relating to the definition of the environment in Section 2 of the RMA. That is, it includes the economic, social and cultural conditions affecting or which are affected by the biophysical aspects of the environment.
- 3.31 That point is reinforced by reference to the relevancy of the national values listed in the preamble to the NPSFM. Those values include “use” values such as (for example), commercial and industrial processes, irrigation, food production, animal drinking and cleaning, dilution and disposal of waste.
- 3.32 Based on that (and on my understanding of Section 5 of the RMA and its primacy over any NPS), I understand that freshwater objectives should be set having regard to the need to use water for economic and social well-being.

That is, the level of environmental “ambitiousness” needs to be informed by the knowledge of what the economic effects will be<sup>9</sup>.

- 3.33 This contrasts with an approach to setting freshwater objectives purely as “ideal” environmental states based on ecological and recreational values alone (accepting that “life-supporting capacity” has a particular prominence due to Objective A1 of the NPSFM).
- 3.34 Related to this is my understanding that freshwater objectives under the NPSFM need to be achievable. This contrasts with the way objectives have been set in plans in the past which was often more *aspirational* in nature. That is, they were seen as states to aim for; not thresholds that necessarily trigger an end to the granting of consents or the claw back of “resource” from existing consent holders.
- 3.35 As discussed above, because under the NPSFM the meeting of freshwater objectives is one of the key tests of whether over-allocation occurs, such objectives need to be carefully defined so as to be clear (and measureable) and avoid unintended consequences. (That is, catchments being defined as over allocated when the underlying values are not compromised or when the implications for resource users are dramatic and were not considered in the objective setting process).

#### **4. MY UNDERSTANDING OF THE PLAN**

- 4.1 I understand that the Plan is ultimately to form the single land and water plan for the Canterbury Region. Over time the existing catchment -scale plans will be reviewed and incorporated as sub-regional components of the Plan. These sub-regional components will be derived from the work of the zone committees working to implement the CWMS through the preparation of zone implementation programmes (ZIPs).
- 4.2 The relationship between the catchment-scale Plan provisions and the general provisions of the Plan is set out in sections 6-15 and Rule 5.2. Unless specifically stated to the contrary in a sub-regional zone chapter, any specific

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9. I note here the Environment Court in its decision on Variation 6 (Water allocation) to the Proposed Waikato Regional Plan [2011 NZEnv380], noted (at paragraph 178) that “Clearly the Act is concerned with economic effects”.

rule in sections 6-15 of the Plan prevails over the relevant general rule in section 5 of the Plan. (I note that existing catchment-scale chapters vary in scope with some controlling water take and use only while others also control discharges).

- 4.3 A core focus of the Plan is on integrating land and water management. The region-wide provisions relating to nutrient management are new but many other provisions are based on the existing Natural Resources Regional Plan (NRRP).
- 4.4 The Plan contains region-wide rules controlling:
- (a) Discharges of various kinds (both point source and diffuse);
  - (b) Taking of groundwater and the taking, damming and diverting of surface water; and
  - (c) Land use (to manage risks associated with erosion prone land and sedimentation, diffuse nutrient discharge, burning and hazardous substances).
- 4.5 As noted earlier, some of these provisions may, in the future, be over-ridden by provisions subsequently introduced to sections 6-15.
- 4.6 Most sub regional sections of the plan (sections 6-15) incorporate environmental flow and surface and groundwater allocation limits (or reference limits remaining operative in other specific catchment plans). No sub-regional section contains catchment nutrient load limits or allowances<sup>10</sup>.
- 4.7 The general approach to nutrient management is to apply interim region-wide rules that differentiate between:
- (a) The regime prior to 1 July 2017 and the period post 1 July 2017;
  - (b) Existing land use and changes to land use; and
  - (c) Different catchments/parts of Canterbury based on their sensitivity and existing state of ground and surface water relative to objectives.

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10. Although the separate proposed Hurunui and Waiau River Regional Plan does include nutrient load limits.

- 4.8 On that basis, prior to 2017:
- (a) Existing farming activity is permitted subject to conditions (with additional conditions in the sensitive Lakes Zone);
  - (b) Change to an existing farming activity is permitted if it is subject to a water take consent that imposes conditions specifying a maximum rate of nitrogen leaching; otherwise
  - (c) Change to a farming activity requires consent ranging from restricted discretionary activity (RDA) to non-complying depending on the area in which it occurs.
- 4.9 Post -2017 farming activities are permitted provided they comply with a rate of N loss specified in Schedule 8 (which has not yet been populated). If the Schedule 8 leaching rates are not complied with, farming requires consent ranging from RDA to non-complying depending on the area in which it occurs.
- 4.10 Although the Plan includes land use provisions that differentiate between pre - and post -2017, it may be that the post-2017 land use provisions are superseded by the notification of sub-regional sections addressing integrated land and water management prior to 2017. I note that the 2012-2022 Canterbury Long Term Plan (page 108) proposes that sub regional plans for most of the sub-regional areas are notified within the next 2 years. I understand that the first of these (Selwyn-Waihora) is programmed for notification in March 2013.

#### **The Plan and the NPSFM**

- 4.11 In terms of compliance with the core requirements of the NPSFM, I note that Section 2 of the Plan defines:
- (a) *Freshwater Objectives* in Section 3 and Policy 4.1 (these include both narrative and numeric objectives);
  - (b) *Limits* as the rules in the plan that set out the maximum amount of resource that can be allocated or which control activities by limiting the extent of use or require consent/prohibit use. (Water quality limits are

described as being set out in the sub regional sections or, where not included in those sections, determined using the regional methodology).

- (c) *Outstanding Water Bodies* as including hapua, natural wetlands, natural state water bodies and identified high naturalness waterbodies and waterbodies subject to Water Conservation Orders.
- (d) *Over-allocation*, in terms of surface and ground water abstraction, as allocation above the limits specified in the sub regional chapters. Allocation of surface water above the limit derived using the regional methodology (in the absence of sub regional limits) is not described as over-allocation. Over-allocation in terms of water quality (and nutrients in particular) is simply defined by reference to the use beyond a limit or to a point where the in-stream outcomes of Table 1 of Policy 4.1 are not met<sup>11</sup>.

4.12 Broadly speaking, I agree with the definition of these terms at a conceptual level and concur that having these terms defined (and committing to limits through sub regional sections) means the Plan gives effect to the NPSFM. Whether it does so in the most appropriate way is a matter discussed elsewhere in this and my Group 2 hearings evidence.

## **5. MY UNDERSTANDING OF DAIRYNZ'S AND FONTERRA'S SUBMISSIONS**

5.1 Although differing in some matters of detail, DairyNZ's is aligned with Fonterra's submission on the substantive issues. The two submissions focus, in large part, on nutrient management issues, which, as outlined above, will be addressed largely as part of the Group 2 Hearings (although some aspects will be addressed during the Group 1 hearings).

5.2 DairyNZ and Fonterra are concerned that:

- (a) There is insufficient recognition in the provisions of the Plan of the importance of agriculture and of the contribution agriculture makes to the social and economic well-being of the people of Canterbury;

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11. Section 2.7 also notes that "in the case of nutrients an assessment of whether the regional in-stream outcomes of Table 1 of Policy 4.1 are [currently] being met is shown in the Planning Maps".

- (b) Many details with the water take and use and discharge provisions need adjustment to recognise the above point and/or to ensure an effective, equitable and workable regime is in place; and
- (c) The land use /nutrient management provisions are too restricting, particularly in the interim (pre-2017) period. (As noted earlier, much of my evidence relevant to this point will be made in the Group 2 Hearings).

## 6. OBJECTIVES

- 6.1 In my opinion, objectives of any resource management plan have two primary purposes. First, they communicate what the plan is trying to achieve, which in turn has a role in justifying the intervention by rules and other methods and also provides a basis for the evaluation of the effectiveness of the Plan. Secondly, objectives have a role in the consideration of resource consent applications by providing an important touchstone against which to weigh assessments of effects. Objectives are particularly important in the assessment of non-complying activities, with their additional statutory hurdle.
- 6.2 It is also important for coherence of the plan that the provisions that follow in the plan link so that the objectives, policies and rules relate logically to one another. Objectives express the outcomes, policies set out the course of action to achieve those outcomes, and the rules deliver that course of action. Viewed in reverse, the objectives should correspond to what the policies and rules deliver. Policies and rules should not “float” but rather be “anchored” to an appropriate objective.
- 6.3 In my opinion the objectives of the Plan are lacking in some respects when assessed against these factors.

### **Recognition of existing investment and the social and economic well-being dependent on continuation of existing takes and discharges**

- 6.4 It is clear to me, that the Plan policies and rules recognise (appropriately) that existing users have an expectation of continuing use of/access to resources (subject to limits). This is apparent from:

- (a) Rules that provide different activity status for replacement takes than entirely new takes (see, for example, Rules 5.39, 5.40, 5.57 5.96, 5.101 which all give recognition, and a preferential planning status, to existing activities relative to new activities); and
- (b) The nutrient management rules that provide a five-year interim adjustment period and a distinction between existing and changed land use.

6.5 For that reason, I believe the objectives should be supplemented by an additional objective consistent with that included in Fonterra's submission. Such an objective would read:

*Recognise that existing water takes and discharges contribute to social and economic well-being and in some cases significant investment relies on the continuation of those takes and discharges, including rural-based activities such as agriculture and perishable food-processing.*

6.6 The inclusion of such an objective would ensure greater coherence between objectives, policies and rules. It would also, in my opinion, better give effect to RPS Policy 7.3.11, which recognises existing activities and infrastructure. That Policy reads:

***Policy 7.3.11 – Existing activities and infrastructure***

*In relation to existing activities and infrastructure:*

- (1) *to recognise and provide for the continuation of existing hydro-electricity generation and irrigation schemes, and other activities which involve substantial investment in infrastructure; but*
- (2) *require improvements in water use efficiency and reductions in adverse environmental effects of these activities, where appropriate.*

6.7 The Fonterra submission proposes another, very similar, objective that makes more specific reference to the discharge of treated wastewater. In my opinion, such an additional policy is unnecessary as the concern about treated wastewater is encompassed in the objective set out above.

**Recognition of the benefits derived from the use of water resources**

6.8 The Plan makes available water for abstraction through the specification of an allocable flow (the default being 20% of the 7DMALF). It also provides a regime to enable a certain amount of nitrogen leaching. It seems to me the Plan does

these things because it seeks that the region's water resources are used (within limits) to allow people and communities to extract social and economic value and enhance well-being. That view is consistent with the CWMS vision:

*To enable present and future generations to gain the greatest social, economic, recreational and cultural benefits from our water resources within an environmentally sustainable framework.*

6.9 This point is made in Objective 3.11 of the Plan, which provides:

*Water is available for sustainable abstraction or use to support a variety of economic and social activities and maximum social and economic benefits are obtained from the efficient storage, distribution and use of the water which is available for abstraction.*

6.10 However, while that objective recognises the value of abstraction it does not expressly recognise the other benefits provided by water; principally the assimilative capacity for the dilution and disposal of waste. That is a matter listed in the Preamble of the NPSFM as a "national value of freshwater" and in my opinion it should be recognised in Section 3 of the Plan. It is a matter of fact that the Plan does (appropriately) provide for the assimilative capacity of water (for nutrients and other contaminants) to be used.

6.11 The Fonterra submission proposed an additional objective to make this point. In my opinion, a wholly new and additional objective may not be necessary if amendment were made to Objective 3.11:

*Water is available for sustainable abstraction or use (including the use of water's assimilative capacity for the dilution and disposal of wastes) to support a variety of economic and social activities and maximum social and economic benefits are obtained from the efficient storage, distribution and use of water which is available for abstraction.*

### **Recognition of the importance of agriculture and maximisation of infrastructure investment**

6.12 Although the above objective recognises the value of water it does not (nor do any other objectives) recognise the value of agriculture to the regional and national economy and to communities across the region. In my opinion, where there is a natural resource-dependent industry with a major benefit to the social and economic well-being of a region that deserves to be acknowledged in appropriate RMA plans. The reality is that, in accordance with Section 5 of the RMA, plans need to be prepared and implemented fully cognisant of the



activities that contribute to economic social and cultural well-being and of their dependence on access to resources<sup>12</sup>.

- 6.13 Agriculture is the main consumptive user of water across most parts of Canterbury and a major contributor to well-being. The benefit of water use is implicit in Objectives 3.11, 3.15, and 3.21.
- 6.14 Mr Butcher details the major economic contribution agriculture (and irrigation) makes to Canterbury. At paragraph 3.2 of his evidence for the Group 1 hearing, he suggests the value of irrigation increases direct farm output by \$3.0 billion per year and GDP by \$1.5 5 billion per year and that once multiplier effects are taken into account, irrigation increases regional GDP by \$3.3 billion per year, generating 25,000 jobs (some 13,400 depend on dairy farming and milk processing). Furthermore, dairy farm output has been growing (over the past 5 years) at 12.6% pa in milk fat terms, and 8.4% pa in terms of the area in dairy.
- 6.15 Although the additional wording I propose above does give greater recognition to the value of water use, it does not expressly reference agriculture. Nor does it recognise that the value agriculture contributes to community well-being will be dependent on being able to extract the greatest benefit from existing infrastructure investment. This includes dairy sector infrastructure such as processing capacity as well as water infrastructure (e.g. storage, conveyance and irrigation investments).
- 6.16 For that reason I support the submission of Fonterra insofar as it seeks recognition of agriculture in Section 3 and the need to make efficient and effective use of existing infrastructure as well as supporting the viability of investment in new infrastructure.
- 6.17 In that respect I propose some modification to the policy proposed by Fonterra so that it reads as follows (amendments shown in red font relate to the version included in Fonterra's submission):

*The value of agriculture to community well-being is able to be maximised*

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12. I note here that the recent Environment Court decision on Variation 6 to the proposed Waikato Regional Plan [2011 NZEnv380], acknowledged the significant economic benefits of both agriculture (from paragraph 163) and irrigation (from paragraph 168).

*through land use and associated discharges that allows for food processing and water storage, conveyance and irrigation infrastructure to be provided and used efficiently to yield greatest social and economic benefit.*

### **How Objectives are to be read**

- 6.18 The Objectives of Section 3 of the Plan are prefaced by the note that:

*The Objectives of this Plan must be read in their entirety and considered together. No single Objective has more importance than any other.*

- 6.19 The Fonterra submission sought that a note be added clarifying that the sum of the objectives does not outweigh the importance of individual objectives and that in any particular case some objectives may be more relevant than others.

- 6.20 In my opinion, the existing advisory note largely addresses the first part of the Fonterra Submission point. That is, it (appropriately) clarifies that no single objective trumps others or that the number of objectives in a similar vein does not necessarily outweigh a single objective that supports an alternative decision.

- 6.21 However, Fonterra's second point that some objectives may (in any given context) be more relevant to others is not currently reflected.

- 6.22 I note from the Council's Section 42A Report that officers have recommended a change to the wording in the Plan. That wording would read.

*The Objectives of this Plan must be read in their entirety and considered together. No single Objective has more importance than any other, but in any particular case some Objectives may be more relevant than others.*

- 6.23 I support that wording.

## **7. STRATEGIC POLICIES**

### **Strategic Policy 4.1 and Table 1**

- 7.1 Policy 4.1 requires that freshwater meets the outcomes specified in Table 1 where no outcomes have been specified in the relevant sub-regional sections. My understanding is that no sub-regional section currently sets water quality

outcomes<sup>13</sup> and hence in the immediate future freshwater is to be managed across Canterbury to achieve the outcomes specified in Table 1.

7.2 In my opinion, (as I discussed from paragraph 3.28) the NPSFM anticipates that freshwater objectives will be developed based on community values (national and local). The developing expert view on this<sup>14</sup> is that community values and hence freshwater objectives are best agreed through a collaborative stakeholder process where all the threats and opportunities, costs and benefits are transparent<sup>15</sup>. My understanding based on the evidence of Ms Hayward is that that has not been the case with the outcomes of Table 1 (albeit high-level, region-wide values were identified and acknowledged through the development of the CWMS). However, the general scheme of the plan is that Table 1 acts as a “back- stop” or interim framework until such time as the sub-regional sections are developed (according to the processes developed through the Canterbury Water Management Strategy). The fact that the Table 1 objectives have not been developed through a catchment-scale, community values identification and evaluation process, does not in my view mean that they ought to be removed from the plan (as noted they have an important interim role) but it is important context that should inform how they are to be applied. This is discussed further below.

7.3 The Fonterra submission sought a number of changes to Policy 4 and associated Tables 1a-c. In particular, it sought that the policy be qualified such that the numerics of Tables 1a-c are to be achieved “over time”<sup>16</sup>. I take that to mean that, when the existing state of a river, lake or aquifer is not meeting the numerics of Table 1a, b or c respectively, then the improvement in water quality/quantity required to ensure compliance with the Tables is to occur over an appropriate adjustment period (rather than, necessarily, immediately).

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13. The Proposed Hurunui and Waiou Rivers Regional Plan sets such limits, but presently is a stand-alone planning document, rather than a chapter of the Plan.

14. As articulated in the Second Report of the Land and Water Forum Report, May 2012 and Third Report of the Land and Water Forum November 2012.

15. It is also expected that values and objectives will be identified and agreed at a sub-regional/catchment/waterbody scale. Indeed, that expectation is recorded both the CWMS and in Policy 7.3.6 of the RPS – see paragraph 7.8.

16. This is consistent with the way the NRRP addresses existing non compliance with water quality outcomes when it refers to “progressively” improving quality.

- 7.4 In my opinion, clarification of this point along the lines suggested by Fonterra is consistent with both the NPSFM and with the intent of Council and the Plan in any event.
- 7.5 As previously noted, the Plan notes that over allocation is to be addressed through the introduction of sub-regional sections (i.e. Sections 6-15). That is a timetabled method consistent with the NPSFM.
- 7.6 For that reason, I consider that a change to Policy 4.1 is warranted to clarify that, Tables 1a, b and c act as interim freshwater objectives, and existing non compliance with those numeric objectives (technical over-allocation for the purpose of the NPSFM) is to be addressed through a phased-in introduction of sub-regional sections.
- 7.7 I note that the Council's Section 42A report (page 101) concludes that submissions seeking timeframes for this policy are reasonable. Accordingly, I agree with the recommendation officers' that Policy 4.1 be amended as follows:

*Lakes, rivers, wetlands and aquifers will meet the freshwater outcomes set in Sections 6-15 within the specified timeframes. If outcomes have not been established for a catchment then each type of lake, river or aquifer will meet the outcomes set out in Table 1 by 2023.*

- 7.8 In my opinion this wording better gives effect to RPS Policies 7.3.6 (2) (b), 7.3.7 (2), which refer to "timeframes". RPS Policy 7.3.6 reads:

**Policy 7.3.6 – Fresh water quality In relation to water quality**

- (1) *to establish and implement minimum water quality standards for surface water and groundwater resources in the region, which are appropriate for each water body considering [My emphasis]:*
- (a) *the values associated with maintaining life supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, and natural character of the water body;*
  - (b) *any current and reasonably foreseeable requirement to use the water for individual, marae or community drinking water or stockwater supplies, customary uses or contact recreation;*
  - (c) *the cultural significance of the fresh water body and any conditions or restrictions on the discharge of contaminants that may be necessary or appropriate to protect those values; and*
  - (d) *any other current or reasonably foreseeable values or uses; and, to manage activities which may affect water quality (including land uses), singularly or cumulatively, to maintain water quality at or above the minimum standard set for that water body.*

and

- (2) *Where water quality is below the minimum water quality standard set for that water body, to avoid any additional allocation of water for abstraction from that water body and any additional discharge of contaminants to that water body, where any further abstraction or discharges, either singularly or cumulatively, may further adversely affect the water quality in that water body:*
  - (a) *until the water quality standards for that water body are met; or*
  - (b) *unless the activities are undertaken as part of an integrated solution to water management in the catchment in accordance with Policy 7.3.9, which provides for the redress of water quality within that water body within a specified timeframe. [My emphasis.]*

7.9 RPS Policy 7.3.7 reads:

**Policy 7.3.7 – Water quality and land uses**

*To avoid, remedy or mitigate adverse effects of changes in land uses on the quality of fresh water (surface or ground) by:*

- (1) *identifying catchments where water quality may be adversely affected, either singularly or cumulatively, by increases in the application of nutrients to land or other changes in land use; and*
- (2) *controlling changes in land uses to ensure water quality standards are maintained or where water quality is already below the minimum standard for the water body, it is improved to the minimum standard within an appropriate timeframe. [My emphasis.]*

7.10 For the avoidance of doubt, I also record my opinion that the contents of Tables 1a, b and c are most appropriately provided for in a policy rather than as an objective. Although that may be regarded as inconsistent with the general scheme of the RMA (where policies derive from objectives, not the other way around<sup>17</sup>), in this instance I consider it appropriate, for the same reasons as set out in the Council's Section 42A report (see Page 101 of that report).

**Management units used for Tables 1a-c**

7.11 I further understand from the evidence of Ms Hayward (paragraph 3.2), that the management units used<sup>18</sup> for rivers is a relatively coarse classification and that the variation in Canterbury's geophysical characteristics is greater than the classification used in Table 1a suggests. This means that the numeric values

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17. As noted by the Environment Court in a recent minute (dated 24 December 2012) requiring further redrafting of Horizon's One Plan provisions.

18. Alpine state, Alpine - upland, Alpine – lower, Hill-fed – upland, Hill-fed lower, Lake-fed, Banks peninsula, Spring-fed – upland, Spring-fed – lower basins, Spring-fed plains, and Urban.

set out in Table 1 will not always be appropriate (because there will be variation in the geophysical characteristics *within* these management units and yet the numerics apply uniformly across each management unit).

- 7.12 Ms Hayward makes a similar point with respect to the categorisation of groundwater sub-units, which she says omits at least two known sub-units (i.e. aquifer types) not included in the Table 1c classification.
- 7.13 The limitations pointed out by Ms Hayward are not surprising. The natural environment is highly heterogeneous in character. The classifications policy-makers and scientists make are inevitably pragmatic approximations of natural units of similar character that are designed to aid management. While the use of these approximations is necessary, it can lead to sub-optimal resource management outcomes.
- 7.14 For that reason, in my opinion, it is appropriate to:
- (a) Ensure management units are as comprehensive and accurate as is practicable; and/or
  - (b) Where there are known issues in the comprehensiveness and/or accuracy of management units that are impractical to remedy, design associated regulation (policies and rules) so as to allow for a degree of flexibility (e.g. a degree of case by case assessment).
- 7.15 The particular issues identified by Ms Hayward are:
- (a) That shallow groundwater predominantly recharged by rivers is not provided for and hence may be considered within the “Deep groundwater predominantly recharged by rivers” sub-unit. That would mean that no change to the state of those would be allowed which, in Ms Hayward’s view, would be inappropriate given this sub-unit is shallow and likely to exhibit some small changes in constituent concentrations.
  - (b) That deep groundwater predominantly recharged by soil drainage is not provided for (despite this occurring in some areas of the inland plains) and hence how it is managed is unclear.

- (c) Consistent with paragraph 7.14 (a) above, I agree with Ms Hayward that some amendment to the way the first sub-unit is described would address both the issues identified above.

7.16 My proposed solution is to amend the description of the first sub-unit to read:

(1) All shallow groundwater; and

(2) Deep groundwater predominantly recharged by soil drainage.

7.17 I also consider that some change is required to the way Policy 4.1 is to be implemented to provide some more fined-grained assessment (and hence less scope for foregoing economic value unnecessarily). I discuss this further in the following section.

### **Numeric outcomes of Table 1**

7.18 I understand that the numeric criteria in Tables 1a and b have been transferred (with minor amendment) from the NRRP (Objectives WQL1 - Chapter 4), while the numeric criteria of Table 1c have been modified from NRRP groundwater objectives WQL2.1 and WQN3.

7.19 The Fonterra submission notes at paragraph 7.10 (b) that (amongst other things) Table 1a should be amended: to indicate that:

- (a) Outcomes may be breached at the catchment scale if circumstances justify it; and
- (b) Some thresholds (numerics) are to be based on averages.

7.20 For the reasons set out below I support this part of the Fonterra submission.

7.21 Ms Hayward notes her support for the indicators (i.e. the “headings”) included in Table 1 noting their imperfect nature. Ms Hayward also supports the numeric criteria for each indicator (also largely imported from the NRRP) but with greater reservation. That reservation relates to the fact that, in terms of their inclusion in the NRRP:

- (a) They were set as being for the *long term* (i.e. they had an aspirational dimension).

- (b) The *full cost and consequences* of achieving them was not determined.
- (c) Water quality indicators are inherently *variable spatially and temporally* owing to both natural and anthropogenic factors.
- (d) They are being applied (in the Plan) in the different regulatory context to that that existed in the NRRP.

7.22 I agree with Ms Hayward's evidence on this point and with the conclusion that the outcomes/numerics themselves may be appropriate (as an interim regime pending more detailed sub regional settings) provided a pragmatic approach is taken to the way they are interpreted and applied.

7.23 It is important to note how the Table 1 outcomes are to be used in the plan. In my opinion that is as follows:

- (a) Some may have been applied (using expert opinion assessment) to define the nutrient allocation zones as shown on the Nutrient Zones map. Hence they indirectly determine the consent status of applications for land use.
- (b) They have been used to set the policy framework for management of water bodies, and thus are matters for consideration in the assessment of resource consent applications.

7.24 I agree with Ms Hayward that this contrasts with the way the same outcomes were used in the NRRP. In that plan the outcomes were expressed as objectives and hence provided a point of reference, or management direction, but were not as determinative of individual decision-making and rule design as they appear to be in the proposed Land and Water Regional Plan.

7.25 In contrast while some policies of the NRRP do cross reference back to the objectives/outcomes this tends to be qualified (such as referring to "significant effects" on the outcomes – see Policy WQL2 (2)); uses as a trigger for instigation of specific to non regulatory responses (such as Policy WQL7); or in relation to specific discharges (Policy WQL5.2). The NRRP policy relating to non point source discharges (Policy WQL5.1) simply identifies specific effects to be minimised and/or practices to be adopted.



- 7.26 It is my opinion, that from a planning perspective, the Plan elevates the importance of the outcomes/numerics (and the degree we can expect them to be determinative of future management) relative to the way they were used in the NRRP.
- 7.27 This supports Ms Hayward's opinion that the outcomes/numerics are proposed to be used in the plan in a *different* way from how they were intended to be used when originally developed<sup>19</sup>.
- 7.28 The other key point to note is the lack of clarity and certainty around how these outcomes/numerics are to be applied. From my planning perspective it seems to me that there is considerable technical detail missing from the plan in terms of how compliance with the outcomes/numerics is to be assessed.
- 7.29 My understanding is that in some parts of the region there will be considerable historic and on-going water quality monitoring information that can be used to assess compliance with the outcomes/numerics of Table 1. However, a number of issues arise. Most obviously there are spatial and temporal dimensions to how water quality data are used that require clarification.
- 7.30 By that I mean, are the outcomes/numerics "absolutes" in the sense that just one exceedance means that water quality is failing to meet the Plan? If not, how many exceedances are tolerable and at what frequency (or flow)? Alternatively, is there some averaging of results across the year (or multiple years) to be carried out? Similarly, at what scale is compliance assessed? For example, is a whole area/zone non-compliant because a single bore shows an exceedance? If not, what proportion of bores need to show an exceedance in order for an area or zone to be considered non-compliant? Or is there some averaging of results over a number of bores in an area/zone? Is the same approach to these issues to be taken uniformly to all the numerics or are some to be applied differently to others?
- 7.31 These are technical rather than planning questions but the acceptability of the Table 1 outcomes/numerics in terms of their effect on users and their effectiveness in meeting the objectives of the plan is dependent on that technical detail.

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19. As a result of a different plan structure and as a result of the NPSFM.

- 7.32 Furthermore, I understand that in many parts of Canterbury there will be little or no water quality monitoring data. In such cases it may be necessary to *model* whether the outcomes have been/will be exceeded.
- 7.33 As currently drafted there is significant uncertainty. Even the way the nutrient allocation zones were derived/classified (see Appendix 6 to the Section 32 Report) acknowledged that “expert opinion” rather than strict application of guidelines was appropriate.
- 7.34 In considering nutrients and the various relevant guideline values (periphyton, macrophytes, nitrate levels, and lake trophic targets) Appendix 6 of the Section 32 Report notes:
- “...guidelines may only be exceeded by a small margin, or intermittently in short seasons or occasional years, while the nutrient sensitive values are still being maintained (no observable effect). It [expert opinion] therefore allows for some level of pragmatism while referring to available guidelines where appropriate and relevant.”*
- 7.35 That seems to be an entirely sensible approach to take. While it was apparently taken in the identification of the nutrient allocation zones (albeit not, in my opinion, with sufficient accuracy - as will be discussed in Group 2 hearings), it is not clear from the Plan that it will be taken more broadly to the application of Policy 4.1.
- 7.36 In my opinion, it should be and that should be made clear in Tables 1a-c. Furthermore, the potential to average monitoring results taking into account both temporal and spatial dimensions should be acknowledged at the very least (even if the precise way this is done is not recorded).
- 7.37 For those reasons I propose that the following advisory notes be included under each of Tables 1a-c respectively:

For Table 1a

*In determining whether a river meets the outcomes of this Table, Environment Canterbury will consider available monitoring/modelling data and apply expert opinion using, in particular, an approach of averaging monitoring/modelling results both temporally and spatially (including across a catchment).*

For Table 1b

*In determining whether a lake meets the outcomes of this Table, Environment Canterbury will consider available monitoring/modelling data and apply expert opinion using, in particular, an approach of averaging monitoring/modelling results both temporally and spatially.*

- 7.38 I also propose that the concept of averaging be introduced to Table 1c. However, that table already includes averages and medians for some objectives so instead of a general advisory note as I propose for Tables 1a and 1c I propose that references be added to “average” within the table itself. Those amendments are set out in Attachment 1 of this evidence.
- 7.39 Finally, I note the Mr Callander has made proposed amendments to the groundwater pressure objectives of Table 1c. Although these are outside the scope of the DairyNZ and Fonterra submissions I have reviewed Mr Callander’s evidence on these points and endorse the various changes he proposes to the Table.

#### **Policy 4.6 – Granting consents in over-allocated catchments**

- 7.40 Policy 4.6 states that resource consents will generally not be granted if the granting would cause a limit to be breached or further over-allocation to occur.
- 7.41 The Fonterra submission sought that the words “*with the exception of renewing existing discharge and water permits*” be added to the policy to ensure that existing consents in fully allocated catchments could be renewed.
- 7.42 While it is questionable that renewing a take at the same level as previously consented could trigger this policy (since it could only perpetuate the status quo), I do support some wording change to avoid any doubt. Certainly, I consider it would be poor resource management practice to have a policy regime that addresses over-allocation by simply declining the next consent in line for renewal.
- 7.43 I also consider that a change to Policy 4.6 along the lines proposed in the Fonterra submission would better give effect to RPS Policies 7.3.2 (4) and 7.3.11. These policies specifically provide for the continued use of existing infrastructure. RPS Policy 7.3.11 is quoted in paragraph 6.6. RPS Policy 7.3.2 reads:

### **Policy 7.3.2 – Natural character of braided rivers and lakes**

*To maintain the natural character of braided rivers, and of natural lakes by:*

- (1) subject to clause (3), by prohibiting the damming of each of the main-stem of the Clarence, Waiaua, Hurunui, Waimakariri, Rakaia, Rangitata and Waitaki rivers,*
- (2) in respect of every other braided river in the region, by ensuring any damming of a braided river does not reduce the braided character of the main stem;*
- (3) in respect of every natural lake by limiting any use of the lake for water storage so its level does not exceed or fall below the upper or lower levels of its natural operating range;*
- (4) clauses 1 – 3 do not restrict continued operation, maintenance or upgrading of any water storage scheme, irrigation scheme or hydro – electricity generation scheme for which lawful consent was in effect when this regional policy statement becomes operative, subject to the activity:*
  - a) remaining a similar scale, intensity and character; and*
  - b) not resulting in any additional significant adverse effect on the natural character of the river or lake.*

- 7.44 I note also that a change to the policy is necessary to make it consistent with Policy 4.47, which specifically provides for replacement of existing takes in over-allocated catchments.
- 7.45 The Council's Section 42A report agrees that consent renewals should be recognised in the policy. I support, in part, the proposed wording included in the Section 42A report. In my opinion, little or no value is added by the additional words "but will likely be subject to additional restrictions".
- 7.46 Any consent is subject to full assessment and conditions will be imposed on a consent consistent with the policies and other provisions of the plan. The Act does not provide any level of assurance that a consent that is "renewed" will be on the same terms and conditions as the consent it replaced. In that sense the proposed wording is redundant.
- 7.47 Further, the wording "will likely" provides no real guidance at all. Indeed, it cannot do so as much will depend on what conditions the previous consent was subject to. Finally, I do not support the word "restrictions" in this context. That term has a particular meaning in water management (i.e. reductions in

entitlement during times of water shortage) and its use in this context may simply cause confusion.

7.48 I do accept, however, that it would be inappropriate to suggest that a renewal of a consent is an automatic “right”. For that reason, I do agree that some qualification to the recognition of renewals is warranted.

7.49 For those reasons, I propose that Policy 4.6 be amended as per the Council’s Section 42A Report but omitting the words quoted above and adding reference to other relevant policies of the Plan. That is, it would read:

*Where a water quality or quantity limit is set in Sections 6-15, resource consents will generally not be granted if the granting would cause the limit to be breached or further over-allocation to occur. New consents replacing expiring consents may be granted subject to having appropriate regard to other relevant policies of this plan.*

## **8. POLICIES - DISCHARGES**

### **Policy 4.11 – Discharges to land**

8.1 Policy 4.11 sets out the fundamental basis upon which discharges to land will be considered acceptable. Policy 4.11 (c) (iii) and (v) address the issue of effects on drinking water quality.

8.2 Fonterra’s submission is concerned with subparagraph (c)(v) of the policy. Fonterra points out that a discharge to land might have a detectable effect on the drinking water quality of groundwater but that effect may not be significant enough to be of concern.

8.3 In (c) (iii) the policy (quite appropriately) protects against a discharge rendering water unsuitable as a source of potable water.

8.4 “Potable” water is not defined in the Plan. However, as Ms Hayward points out, the Drinking Water Standards for New Zealand (DWSNZ) define potable water as water that (in essence) does not contain contaminants that exceed the maximum acceptable values of the DWSNZ.

8.5 Hence there does seem to be a duplication between matter (c)(iii) and matter (c)(v) except that matter (c)(v) is more onerous as it implies that any

increase in contaminant levels in groundwater would be unacceptable even if the levels would, after any increase, remain below that drinking water standard.

- 8.6 In my opinion the issue is compounded by the recommendation of the Section 42A Report to elevate matter (c) (iii) such that it is one of the three key conditions of a discharge to land (identified as (a)-(c)). The Section 42A Report proposal contains a flaw in logic because it states that:

*Where meeting (a), (b) and (c) is not practicable the discharge will:*

.....

*(vi) not have any adverse effects on the drinking water quality of the groundwater.*

- 8.7 In other words, the policy proposed in the Section 42A Report says that when, as a result of a discharge, it is not practicable to ensure that water remains suitable as a source of potable water, the discharge may still be acceptable if (amongst other things) it does not have any adverse effects on drinking water quality. That is to impose an even higher standard than the standard the discharge is supposedly unable to meet. If an alternative means of compliance is to be provided for in policy it cannot logically impose a higher threshold test (for the same issue) than that which triggers the need to consider that alternative pathway.
- 8.8 In my opinion, Policy 4.11 should be restructured as per the Section 42A report but the reference to potable water should be removed. Ms Hayward's evidence states matters (a)–(c) should ensure that there is no contaminant movement to groundwater therefore reference to effects on drinking water in that part of the policy is redundant. I agree.
- 8.9 I agree that the effect on drinking water needs to be a part of this policy and therefore I support retention of reference to drinking water as a secondary matter. That is, in the event that it is impractical to meet matters (a) and (b) or to have contaminants accumulate in the soil to the point that use is compromised, the discharge will still need to ensure drinking water quality is protected.
- 8.10 However, rather than refer to any effect on drinking water, the provisions should (based on Ms Hayward's evidence) refer to the need to ensure that neither the

Maximum Acceptable Values for determinands of health significance or the guideline values for aesthetic determinands of the Drinking Water Standards for New Zealand are not exceeded. I understand that this is a more stringent test that simply ensuring water is potable.

8.11 I provide my suggested wording below.

*Any discharge of a contaminant into or onto land where it may enter groundwater:*

- (a) *will not exceed the natural capacity of the soil to treat or remove the contaminant;*
- and*
- (b) *will not exceed available water storage capacity of the soil; and*
- ~~(c) *will not result in the accumulation of pathogens, or a persistent or toxic contaminant that would render the land unsuitable for agriculture, commercial, domestic or recreational use.*~~
- ~~(d) *where meeting (a), (b) and (c) this is not practicable the discharge will:*~~
  - (i) *meet any nutrient allowance in Sections 6-15 of this Plan;*
  - (ii) *utilise the best practicable option to ensure the size of any contaminant plume is as small as is reasonably practicable, and*
  - ~~(iii) *ensure there is sufficient distance between the point of discharge, any other discharge and drinking water supplies to allow for the natural decay or attenuation of pathogenic micro-organisms in the contaminant plume;*~~
  - ~~(iii) *not result in the accumulation of pathogens, or a persistent or toxic contaminant that would render the land unsuitable for agriculture, commercial, domestic or recreational use or water unsuitable as a source of potable drinking water or for agriculture.*~~
  - (v) *not raise groundwater levels so that land drainage is impeded; and*
  - ~~(vi) *not result in groundwater quality exceeding maximum acceptable values for determinands of health significance or guideline values for aesthetic determinands as included in the Drinking Water Standards for New Zealand 2005.*~~

## **9. RULES – DISCHARGES**

### **Rule 5.70 – Discharges to land**

9.1 Rule 5.70 makes any discharge to land (excluding sewage) that may enter water a discretionary activity (unless it is a permitted activity under Rule 5.69).

- 9.2 The Fonterra submission raised two points with regard to this rule. First, Fonterra sought that there be specific rules providing for a discharge to surface water as a discretionary activity (if a new discharge) or as a restricted discretionary activity (if it were a consent for a replacement discharge).
- 9.3 I understand that Rule 5.6 already addresses the issue of discharges to water by making such discharges a discretionary activity. In my opinion, for the reasons set out above, I consider that Rule 5.6 appropriately addresses discharges to surface water.
- 9.4 Secondly, Fonterra sought that discharges to land where contaminants may enter water be made a restricted discretionary activity rather than a discretionary activity. In my opinion, there is a planning logic to that request. Generally speaking, I understand that discharges to land are to be preferred ahead of discharges to surface water. In my experience, this is based on avoidance or mitigation of adverse in-stream (ecological) and recreational effects. Cultural values are also a common issue with discharges to surface water. While there can be exceptions to that general position (for example, where geotechnical conditions make discharge to land problematic) planning provisions that incentivise disposal to land in preference to discharge to surface water can often best promote the purpose of the Act.
- 9.5 In that sense, differentiating in activity class between discharges to land and discharges to water may be a useful signal for the Plan to send.
- 9.6 Moreover, the range of issues associated with a discharge to land is, or should be readily definable. The plan already provides for a range of discharges to land that do not meet permitted activity conditions to be restricted discretionary activities and the range of matters of discretion is well defined in those cases. (These include Rule 5.17 – discharges of material from composting toilets; Rule 5.19 – discharges of oil to land; Rule 5.26 – discharges of agrichemicals; Rule 5.29 - discharges to land associated with offal pits; Rule 5.31 – discharges to land associated with on-site refuse disposal; Rule 5.35 – discharges associated with stock holding areas; Rule 5.37 – discharges from silage pits and compost; Rule 5.71 - discharge of stormwater from a network utility operator and various other rules).



9.7 In my opinion, the Council can retain adequate and appropriate discretion to impose suitable conditions by specifying matters of discretion in very similar terms to how the Plan deals with the activities controlled by the Rules listed above.

9.8 For those reasons I propose that Rule 5.70 be redrafted to read:

*The discharge of any liquid or sludge from any industrial or trade process, excluding sewage, into or onto land or into or onto land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.69 is a restricted discretionary activity.*

*The CRC will restrict the exercise of its discretion to the following matters:*

- 1. The effect of not meeting the condition or conditions of Rule 5.69;*
- 2. Measures to avoid, mitigate or remedy adverse effects on aquatic ecosystems and human or animal drinking water;*
- 3. Measures to store liquid or sludge and application rates;*
- 4. The adequacy of design, construction, systems and management processes to minimise fugitive discharges from the liquid/sludge storage and disposal system; and*
- 5. The extent to which the proposed activity is consistent with the objectives and policies of this Plan relating to Ngai Tahu values, human and animal health and drinking water quality, including Policy 4.11.*

## **10. POLICIES - GROUND AND SURFACE WATER TAKES**

### **Policies 4.46 and 4.47 – Exemptions from flow regimes and ground water limits**

10.1 Policy 4.46 allows group or community drinking water supplies to be exempt from the environmental flow and allocation limits, groundwater allocation block, minimum flows, residual flows or partial restriction conditions provided the water supply is managed to restrict the use of water from those supplies during periods of low flow. Such takes continue to require consent (under Rule 5.88) with the requirement to restrict use during periods of low flow managed through requiring a Water Management Strategy as part of that consent.

10.2 Policy 4.47 address the issue of what takes are allowable once a catchment reaches full allocation. In essence, the policy says that only takes for group or

community drinking water, stockwater and replacement takes will be allowed. Further, it states that replacement takes will need to show a “significant and enduring improvement in the efficiency of water use and reductions in adverse effects”.

- 10.3 Three issues arise from the combined effect of these policies.
- 10.4 The first issue relates to the potential for confusion over the status of water taken in accordance with section 14(3)(b) of the RMA (i.e. “stockwater”). The interpretation note on page 5-20 of the Plan states that:
- “Nothing in this plan affects an individual’s right to take water in accordance with section 14(3)(b)”*
- 10.5 Policy 4.47 is consistent with that interpretation note as it provides for stockwater takes even once a catchment is fully allocated. However, no reference is made to stockwater in Policy 4.46. As noted above, that policy refers only to group or community drinking water supplies.
- 10.6 The inference that may be taken from reading those policies in isolation from the interpretation note quoted above, is that while stockwater takes are exempt from the “environmental flow and water allocation regime” (addressed in Policy 4.47) they are not exempt from “minimum or residential flow or partial restriction conditions” (addressed in Policy 4.46).
- 10.7 Given the interpretation note already quoted, this possible interpretation of the provisions appears unintended. I understand that is Fonterra’s point. In my opinion the matter can be quite easily resolved with minor amendment to Policy 4.46. I propose such a change below.
- 10.8 A second issue is the apparent exemption enjoyed by group or community supply water takes (under Policy 4.47) from the need to ensure water is used efficiently when catchments are over-allocated. Although, as noted above, group or community water supply takes will be subject to consent under Rule 5.88 they are not obliged to show “significant and enduring improvements in the efficiency of water use” when a catchment is over allocated.
- 10.9 That contrasts with the obligations that are imposed on other users (such as industrial/processing facilities not connected to municipal/ community supply

schemes) under Policy 4.47 to show “significant and enduring improvement in efficiency of water use”. That raises equity issues with expectations of water use efficiency dependent on whether or not you are connected to a municipal supply scheme.

10.10 In my opinion, some refinement of both Policies 4.46 and 4.47 is required to address the issues identified above. Accordingly, I propose that Policy 4.46 should be amended to read<sup>20</sup>:

*Subject to Policy 4.47, Enable the taking of water ~~for group or community drinking water supplies~~ by not requiring compliance with any minimum or residual flow or partial restriction conditions and the environmental flow and allocation regime for surface water or groundwater allocation block-limits in respect of:*

*(a) stock drinking needs (in accordance with Section 14(3)(b) of the Act); and*

*(b) group or community drinking water supplies provided water supply is managed to restrict the use of water from those supplies during periods of low flow or water levels.*

10.11 Assuming that drinking water supply is defined such that it means water supplied by the “group or community supplier that is of drinking water quality”, I propose that Policy 4.47 should be refined as follows:

*Where the rate of take or volume of water consented for abstraction from a catchment exceeds the environmental flow and water allocation regime for surface water or stream depleting groundwater, or the groundwater allocation limit for that catchment, any further allocation of water is limited to:*

*(a) any abstraction necessary to meet community drinking needs and stockwater (provided all reasonable measures are taken to ensure efficient take and use); and*

*(b) the replacement of existing resource consents (including takes for group or community water supplies) at the same rate of take and the same or a lesser annual or seasonal volume, provided there are significant and enduring improvements in the efficiency of water use and reduction in any adverse effects where such efficiencies and reduction in adverse effects is reasonably practicable.*

10.12 In my opinion such amendment (or amendment to similar effect) is necessary to ensure that there is a reasonable expectation of water use efficiency by all users where a situation of over-allocation exists.

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20. I also suggest that some of the terms used could benefit from being defined, although that is not a matter within the scope of the Fonterra submission.

- 10.13 The final amendment shown at the end of sub part (b) above is, in my opinion, necessary to recognise that achieving water use efficiency gains from existing users may not always be possible. Water users already operating at, or beyond, industry best practice for water use efficiency may not be able to make “significant and enduring savings” because they are already highly efficient in their water use. Mr Goldschmidt advises that Fonterra’s Darfield site is in that category (see paragraph 3.8 of his evidence). I accept that that may well also be true for some group or municipal supply takes.
- 10.14 Mr Goldschmidt also advises (paragraph 6.2) that good practice in water use efficiency will vary from site to site according to installed infrastructure and plant design limitations.
- 10.15 For those reasons, each application needs to be treated on its merits rather than expecting that all users can make high levels of savings. Otherwise, the policy would create a perverse incentive for users *not* to introduce efficiency measures prior to consents coming due for replacement so as to save “easy” water efficiency gains to be able to offer through the consent process. Unless amended as I propose, the policy may penalise those users who have been “early adopters” in introducing water efficiency measures.

**Policy 4.52 - Moving water from one catchment to another**

- 10.16 Policy 4.52 sets out effects that are not to occur when water is transferred from one catchment to another.
- 10.17 Fonterra’s submission is that:
- (a) The Ngāi Tahu values need to be specified; and
  - (b) The policy should be qualified to the extent that it focuses on “significant adverse effects”
- 10.18 I agree with the Fonterra submission. The policy is, in my opinion, too absolute in its expression. As noted by Mr Callander (at section 5 of his evidence), when water is moved from one catchment to another it is generally associated with a major infrastructural investment and the flows involved are necessarily

significant to justify the investment. In such cases it is simply unrealistic to expect there to be no adverse effect at all.

- 10.19 Similarly, the reference to unspecified Ngāi Tahu values creates too much uncertainty. While I support values of Ngāi Tahu being considered in the context of proposals to transfer water between catchments, in my opinion, it would be good planning practice for the Plan to provide a clear indication to prospective applicants of the scope and nature of these values.
- 10.20 I note that the Ngāi Tahu Freshwater Policy includes Chapter 4.2 on identification of Ngāi Tahu values and uses of freshwater. These include Mauri, Kaitiakitanga; and Rahui. More particular concerns are discussed with regard to each of these themes. In my opinion, Policy 4.53 would benefit from reference to the Ngāi Tahu Freshwater Policy or from incorporation of key values expressed in that document.
- 10.21 I would not presume to speak for Ngāi Tahu by attempting the latter but if clarity around these values is articulated through this Plan process I would support (in principle) the inclusion of those values in Policy 4.52 in preference to the proposed wording<sup>21</sup>. If that does not eventuate I propose that Policy 4.52 reference the Ngāi Tahu Freshwater Policy 1999. Furthermore, I believe it is appropriate to ensure that the values of that policy be “taken into account” rather than “not adversely affected”. That would be consistent with section 66(2A)(a) of the RMA as outlined at paragraph 3.5 of this evidence. This is because of the absolute nature of some of the values as expressed in the Ngāi Tahu Policy. I note, in particular, that page 14 of the Ngāi Tahu Policy asserts that the protection of Mauri involves:

*Prohibiting the unnatural mixing of water sourced from different water bodies*

- 10.22 It would be counter-intuitive (and counter to the broad scheme of the Plan) to have a policy controlling inter-catchment water movement that requires that all such movements be necessarily prohibited. In my opinion, that view, as

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21. Alternatively I support the identification/articulation of Ngai Tahu values through the sub-regional sections as proposed in the Councils section 42A Report in response to submissions on Policy 4.3. If that were to be the accepted position policy 4.53 would need to cross reference to those sections.

expressed by Ngāi Tahu, is a matter to be considered and weighed by decision-makers but not one that ought have an absolute determinative effect.

10.23 For those reasons I propose that Policy 4.52 be redrafted as follows:

*The discharge of water resulting from moving water from one catchment or water body to another ~~does not~~:*

- (a) *Does not facilitate the transfer of fish species, plant pests or unwanted organisms into catchments where they are not already present;*
- (b) *Takes into account Ngāi Tahu values as articulated in the Ngāi Tahu Freshwater Policy 1999;*
- (c) *Avoids significant ~~Adversely affects~~ on the natural character of the receiving water;*
- (d) *Does not compromise the ability of ~~Adversely affect~~ existing drinking water treatment systems to ~~the extent that they are no longer able to~~ effectively treat the water to achieve the standards set out in the drinking water Standards for New Zealand; and*
- (e) *~~Adversely affect~~ Maintains potential for fish migration where it exists.*

#### **Policy 4.53 – Abstraction of water from outside the catchment**

10.24 Policy 4.53 refers to water introduced from outside the catchment not being available until a new or revised environmental flow and allocation regime is introduced through a plan change.

10.25 Fonterra's submission questioned the purpose of the policy and sought it be amended to allow for abstraction of water moved into a catchment before a plan change is introduced specifically enabling it, provided there is not significant impact on regionally integrated supply and distribution networks.

10.26 My understanding of the situation when water is to be diverted from one catchment to a different catchment as part of a future irrigation project is that this is most likely to be facilitated through a plan change process (unless specifically provided for in a sub regional section of the Plan). In that case, the Fonterra concern could be managed by ensuring that any such plan change takes a fully integrated approach and re-specifies flows that would result from that diversion/take and discharge down-stream of the discharge point.

10.27 In my opinion, this matter could be clarified through an advisory note that sets out the expectation that the plan change referred to in Policy 4.53 is the plan change facilitating the diversion of water and not a wholly new and additional plan change process.

10.28 I propose such an advisory note to read as follows:

*Advisory note: Where the introduction of water from outside the catchment is facilitated by way of a plan change, that plan change will also introduce the new or revised environmental flow and allocation regime referred to in this policy.*

### **Policy 4.61- Partial Restrictions**

10.29 Policy 4.61 details the factors to be applied to the imposition of partial restrictions on water takes.

10.30 Fonterra's principal submission point on Policy 4.61 is that a pro rata reduction to protect minimum flows at the time of water shortage will not always be the best solution and can lead to inequities.<sup>22</sup>

10.31 That is a view I support. I note that Policy 4.46 (as discussed above) exempts group or community supply water from partial restrictions at times of water shortage. This means that industry connected to municipal supply networks can continue operations through water shortages uninterrupted while those industrial facilities not so connected will need to reduce their takes on a pro rata basis (in association with all other "non-connected" water users).

10.32 Such a situation may lead to perversities such that rural-based industries processing perishable food must reduce water use while urban based industries engaged in less "time-critical" industrial processing continue at pre water shortage consumption levels.

10.33 I note Mr Goldschmidt's evidence (at paragraph 7.4) states that a proportional reduction in takes for irrigation of dairy farms would not necessarily translate to the same proportional reduction in the need for water in a dairy factory processing the milk from those farms. This may be because farms maintain

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22. I do acknowledge that the policy refers to "stepped or pro rata regime" which implies that the step down may not necessarily be on a pro rata basis but this is somewhat negated by the suggestion that the step must apply "equally to all takes".

production levels through supplementary feed meaning milk volumes are unaffected by a short-term partial water take restriction.

- 10.34 Mr Butcher points out (at paragraph 4.7) that the value of water for processing is “vastly in excess of its value in alternative uses such as irrigation”.
- 10.35 Thus a *pro rata* approach that requires the same proportional reduction in irrigation as that required of dairy processing at times of water shortage may not be economically rational and mean that dairy processing facilities cannot process the milk available for processing. That in turn may mean, according to the evidence of Ian Goldschmidt, that milk may need to be dumped.
- 10.36 Mr Goldschmidt also notes that shutting down and restarting operations at a dairy processing site actually increases water use due to the need for increased cleaning of equipment.
- 10.37 For these reasons, in my opinion, Policy 4.61(c) should provide for exceptions to the *pro rata* approach to partial restrictions so that consents for individual industries/consent holders can be given priority that reflects their particular circumstances and vulnerability.
- 10.38 Furthermore, water user groups can operate in such a way as to reduce use in times of water shortage that collectively achieve a reduction target but which do not necessarily result in a *pro rata* reduction for each individual consent holder. This does appear to be acknowledged and anticipated by Policy 4.74 which focuses on sharing water within a water user group.
- 10.39 For that reason I propose that Policy 4.61(c) be amended as follows:

(c) not induce the flow to fall below the minimum flow due to abstraction and be based on a stepped or pro rata restriction regime that applies equally to all takes within the allocation block unless an alternative, differentiated approach is:

(i) Specified in a relevant sub-regional section; or

(ii) Warranted on the basis of minimising overall impact on food production and processing.



### **Policy 4.73 - Transfer of water permits and reducing over-allocation**

- 10.40 Policy 4.73 establishes an approach of requiring a forfeiture of a percentage of a take at the time of transfer. This is ostensibly justified on the basis of:
- (a) Reducing over-allocation; and
  - (b) Incentivising efficient use of water.
- 10.41 The Fonterra submission opposes that approach.
- 10.42 I understand that there can be a theoretical or “paper” over-allocation as a result of water takes being consented but not used and that this can impede the efficient allocation of water.
- 10.43 I note and accept the point made in the Council’s Section 32 report (page 108) that:
- “...use of previously unused water will tend to exacerbate the effects of over-allocation, and can, particularly for surface water, lead to reductions in the reliability of supply for all users.”*
- 10.44 It is, in my opinion, appropriate for Council to address both that paper over-allocation and any actual over-allocation. Indeed, the latter at least must be addressed under Policy B6 of the NPSFM.
- 10.45 However, it is my opinion that the approach proposed in the Plan is not an effective or efficient means to achieve the desired result. According to Mr Butcher<sup>23</sup>, it may have a perverse consequence of acting as a disincentive to the transfer of permits undermining allocative and dynamic efficiency<sup>24</sup>. In that respect it is my opinion that the Policy 4.73 is inconsistent with Policy B3 of the NPSFM. Policy B3 states:
- By every regional council making or changing regional plans to the extent needed to ensure the plans state criteria by which applications for approval of transfers of water take permits are to be decided, including to improve and maximise the efficient allocation of water.*
- 10.46 While Policy 4.73 is consistent with the first part of this NPSFM policy in that it sets out criteria to apply to transfers of permits, it is inconsistent because those

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23. Evidence of Mr Geoffrey Butcher, paragraph 5.2, page 8

24. The Section 32 Report notes this as a cost but does not attempt to quantify the scale of that cost.

criteria are likely to reduce the efficiency with which water is allocated by introducing barriers to such transfer unrelated to the effect of the transfer.

- 10.47 Mr Goldschmidt provides a good example of this disincentive in his evidence when he acknowledges that Fonterra currently holds a consent for the Darfield processing site that allows for a take of water greater than needed for current operations. That water entitlement was effectively purchased with the land.
- 10.48 The excess water will be needed for plant expansion in the future but it may be that Fonterra could transfer that surplus water to other users in the catchment in the interim. However, Mr Goldschmidt advises (paragraph 6.14 of his evidence) that that would not be viable under the regime proposed by Policy 4.73 since, unless it sought and was granted a non-complying activity consent, Fonterra would need to surrender a portion of water that Fonterra has effectively paid for and which it will need in the future.
- 10.49 Similarly, Mr Goldschmidt points out that some of Fonterra's processing facilities in Canterbury may need to be the *recipients* of transferred water permits in the future as that may be the only means by which additional water can be secured to enable increased processing capacity. In that sense a barrier, or at least disincentive to transfer, may reduce supply of transferable permits and make securing additional water even more difficult.
- 10.50 Furthermore, the justification given for the "surrender at transfer" policy as being about reducing over-allocation is, in my opinion, in conflict with Policy 4.7 which states that:

*Where over-allocation of water for abstraction from surface water catchments and groundwater zones or nutrient discharges has been determined, a regime will be established in Sections 6-15 that provides methods and a timeframe to eliminate the over-allocation.*

- 10.51 Policy 4.73 and the justification given for that policy, contradicts Policy 4.7 by introducing a method to address over-allocation now, before a full analysis of methods to reduce over-allocation has been undertaken on a sub-regional basis.
- 10.52 No analysis has been carried out in the Section 32 report as to the merits and efficiency and effectiveness of this method relative to the other methods

available to reduce over-allocation. No analysis has been provided regarding how much over-allocation is expected to be reduced by this method or at what cost that reduction will be achieved.

- 10.53 In addition to the points raised above relating to over-allocation, I also note the comments made in the Section 32 report (page 109). That part of the Section 32 report apparently justifies the differences between the proportions of water that must be surrendered on the basis of maximising efficient use of water. It suggests that it is more efficient to use surface water in the up-plains area because (as I understand it) a portion of that water will recharge groundwater increasing groundwater supply down plains. The report notes that currently in some areas the reverse practice occurs (i.e. deep groundwater is taken in the up plains while surface water is abstracted in the lower plains) and that in terms of maximising the efficient use of water across the catchment such practice is undesirable and should be remedied.
- 10.54 As I understand it, based on the discussion in the Section 32 report, Council wishes to:
- (a) Discourage transfers of surface water permits from up plains to down plains (and encourage surface water permit transfers from down plains to up plains); and
  - (b) Encourage the transfer of ground water permits from up plains to down plains (and discourage ground water permit transfers from down plains to up plains).
- 10.55 It is my understanding that transfers within the up plains zone or within the down plains zone have a neutral effect on overall, catchment-scale water use efficiency and therefore there is no basis to either encourage or discourage such transfers.
- 10.56 Those points acknowledged, the provisions of Rule 5.107 require the greatest proportion be surrendered (50%) when a permit is transferred within either the up plains or down plains (rather than between these areas). The “encouragement” to transfer permits in the direction preferred by Council (so as

to improve overall water use efficiency) is that such transfers must surrender “only” 25% of their consented water.

10.57 That does not seem to me to provide a strong incentive to rationalise the type and location of water take permits and is more likely to act as a disincentive to transfer. As noted earlier, that is also the evidence of Mr Butcher. He points out that (at paragraph 11.2) that the doubling of the water price (as would result from the loss of 50% on transfer) “would effectively negate the benefits of the transfer as it would not occur”.

10.58 On that basis the Policy would not be effective as reducing over-allocation hence would not pass the Section 32 test as it is clearly not the most appropriate way to achieve the objective.

10.59 In summary, it is my opinion that the surrender of a portion of a permit could be theoretically justified where it is necessary to:

- (a) Address the potential for the adverse effects of the take to be greater in the new proposed location than in the original location if taken at the volume/rate of the original location; and/or
- (b) Incentivise particular types of permit transfers to or from some locations relative to others; and/or
- (c) Reduce over-allocation.

10.60 However, there is a clear risk and cost associated with using the council’s proposed approach (of surrendering water at the time of permit transfer) to address any of those outcomes – particular the latter two. For that reason, the costs and benefits need to be properly assessed relative to other methods. To impose the burden for reducing over-allocation on just those who transfer permits raises a host of planning issues in addition to effectiveness and efficiency, including most obviously fairness and equity.

10.61 Furthermore, if such an approach were to form part of a response to the issues identified above, it would be my expectation that a much more tailored approach would be required rather than one applying pre-determined percentage reductions regardless of individual circumstances (or, as Mr Butcher

points out, (paragraph 11.8 of his evidence), evaluation of the effectiveness in total “claw back” at a given percentage of water surrendered).

- 10.62 In that sense, I would expect the proportion of surrender to be a matter for council discretion which would be exercised taking into account a range of factors including for example, the impact of the transfer on flows/levels at the new take location, whether the water had been fully used prior to transfer, how essential the full take is for the needs of the recipient of the transferred permit; whether the transfer is intended to be temporary (for example if the transferor needs the water back in the future) and how important the recipient user is to the wise and efficient use of resources in the region. (For example, denying water to a dairy factory that must process milk by requiring part surrender of a water permit, may have significant economic, social and environmental consequences).
- 10.63 All that is, however, a matter that in my opinion should be resolved through the development of the sub-regional sections (consistent with Policy 4.7 of the Plan). Only once they are prepared will we know what the full range of options is for resolving over-allocation in any particular catchment or sub catchment. Options that will need consideration include (but are not limited to):
- (a) Augmentation projects (i.e. storage and/or inter catchment transfer);
  - (b) Reviewing conditions on existing consents to determine whether efficiency gains are possible;
  - (c) Shared reductions across the catchment (by review or as consents expire);
  - (d) Introduction of rostering arrangements; and
  - (e) Establishing user groups.
- 10.64 In the absence of that consideration, Policy 4.73 is premature and may:
- (a) Be counter-productive to the efficient allocation of water (i.e. have perverse outcomes); and/or

- (b) Result in the burden of over-allocation being shouldered by a few water permit holders – and not necessarily the least efficient users (i.e. be inequitable); and/or
- (c) Cost more per cubic metre of water take reduced than would be the case using a different method (i.e. be economically inefficient).

10.65 For all those reasons I propose that Policy 4.73 and the associated part of Rule 5.107 (sub part 5) be deleted.

**Policy 4.76 - Consent duration**

10.66 Policy 4.76 seeks to limit (to five years) the duration of:

- (a) Land use consents for farming in the “red zone”; and
- (b) Water take and use consents<sup>25</sup> in over- allocated groundwater zones:

*“if the land use and associated nutrient discharges or water take and use would impede the ability of the community to find an integrated solution to manage water quality and over-allocation”.*

10.67 In my opinion, the policy is unhelpful for two reasons:

- (a) First, the qualification relating to “impeding finding an integrated solution” is vague and uncertain. I do not have any planning understanding of what that may mean or how I might advise a client as to whether a consent application might be expected to meet that test.
- (b) A five-year duration provides no security whatsoever for an applicant. Given that the consents described in paragraph 10.66 a. would be non-complying, the consent process can be expected to be difficult and expensive. In my opinion, there is very little likelihood that any applicant would go through the uncertainty and expense of a non-complying activity application if the most they could expect is a five-year consent and no security that it will be renewed<sup>26</sup>. Consent applications for ground

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25. It is not clear to me whether this relates to both surface water and ground water takes.  
 26. What also needs to be considered is the cost of the investment in dairy conversion which Mr Butcher calculates at \$21,000 per hectare. For the average sized Canterbury dairy farm (225 ha) that makes a total investment of \$4.725 million on a five yearly “at risk” cycle.

or surface water takes described in paragraph 10.66 b. can only relate to replacement takes since any new take in an over-allocated catchment is a prohibited activity (where limits are set in section 6-15). Thus, under this policy, the replacement of an existing consent would, if granted, be given a maximum 5-year duration even if that is a long-standing take that has achieved significant efficiencies. In my opinion, that is unreasonable.

10.68 I note that Mr Butcher concludes (at paragraph 6.2) based on rates of return for dairy of 13 years a five-year consent term means dairy conversion is unlikely to occur.

10.69 An explanation of the rationale for the policy is provided in page 112 of the Section 32 Report, which states:

*The CWMS and zone implementation programmes are the primary means of addressing over allocation in the near term. These programmes may be thwarted from successful implementation if the resources are "locked up" for extended periods.*

10.70 While I understand that motivation, it does seem to me unreasonable that consent applicants (including those seeking replacement consents) are penalised because of the way in which Council has decided to structure and phase the introduction of new planning provisions.

10.71 Policy 4.76 simply serves to deter any applicant from making a non-complying consent land use application for land use change.

10.72 Those whose existing groundwater take applications expire will have no option but to apply and, if the application is approved, receive a consent for a five-year term. As I read the policy, it will apply even after specific sub-regional provisions are introduced meaning every replacement groundwater take in over allocated zones is limited to a five-year consent.

10.73 In my opinion, except in exceptional circumstances, if an application passes the tests of the Act as they relate to a non-complying activity application that consent should be granted a reasonable term of at least 10-15 years<sup>27</sup>. If the

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27. This is consistent with the findings of the only survey of consent durations under the RMA that I am aware of (van Voorthuysen, 2000) which found the typical discharge to land consent duration ranged from 9-35 years with an average of 20 years; and the

application cannot meet those tests it should not be granted. Five-year consents for land use change requiring major investment or for the replacement of an existing take on which significant investment relies is not a tenable planning approach.

10.74 For those reasons I propose that Policy 4.76 be deleted. In proposing this I am aware that the question of duration of consents remains a discretion for Council to exercise on a case- by- case basis.

## **11. RULES - SURFACE AND GROUND WATER TAKES**

### **Rule 5.102 – Take and use of Groundwater outside GAZs**

- 11.1 Rule 5.102 makes taking groundwater from outside of GAZ a non-complying activity. The Fonterra submission seeks that such takes should be discretionary activities.
- 11.2 From the evidence of Mr Callander (his Figure 4) I note that areas not within a GAZ are limited largely to upland areas and Banks Peninsula and that the vast majority of existing groundwater abstractions are occurring from aquifers identified as GAZs in the Plan (see paragraph 8.2 of Mr Callander's evidence).
- 11.3 Mr Callander's evidence (pages 16-17) makes a number of key points:
- (a) There is likely to be some sources of groundwater outside GAZs that would support abstraction;
  - (b) That groundwater takes outside of GAZs are likely to be small-scale with localised effects; and
  - (c) That outside of GAZs there is not a lot of groundwater information available.
- 11.4 On the basis of that evidence, there seems to me to be no planning basis to determine that takes outside of GAZs will be generally inappropriate except in some unique circumstances and therefore deserving of non-complying activity status.

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typical surface water take consent duration ranged from 7-35 with an average of 18 years.



- 11.5 In my opinion, that lack of evidence that a groundwater abstraction from outside of a GAZ would have significant adverse effects, coupled with the apparent low risk of significant demand for abstraction justifies discretionary activity status. Such an application would need to be assessed against Policy 4.49 offering appropriate assurance that potential adverse effects can be identified and managed through conditions on consent or, if necessary, through declining of an application.
- 11.6 I note, in particular, the obligation an applicant for such a discretionary activity would have (in terms of an acceptability of the assessment of environmental effects) to demonstrate the sustainability of a take (in terms of effects on surface water<sup>28</sup> and other bore owners – if any) in the absence of an allocation limit being set in the Plan.
- 11.7 Policy 4.49 does anticipate that groundwater takes outside of the GAZ will be acceptable in some circumstances and sets out very tight criteria to define those circumstances.
- 11.8 For all those reasons I propose that Rules 5.102 and 5.103 amended to read:

*Rule 5.102*

*The taking and use of groundwater where the point of abstraction is outside of a Groundwater Allocation Zone on the Planning Maps is a ~~non-complying~~ discretionary activity.*

*Rule 5.103*

*The taking and use of groundwater that does not meet one or more of the conditions ~~1~~ 2 to 4 in Rule 5.101 is a non-complying activity.*

## **12. CONCLUSION**

- 12.1 Many detailed points raised in the Fonterra submission relating to the Objectives of Section 3 and the water take and discharge provisions of Sections 4 and 5 are valid and do warrant amendment to the provisions of the Plan. In most cases amendments are minor in nature.
- 12.2 The following provisions of the Plan questioned by Fonterra should, in my opinion be deleted entirely. These are:

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28. Schedules 9 and 12 of the Plan which sets out how stream depletion is to be determined and how well interference is to be determined, will apply.

- (a) Policy 4.73 and Rule 5.107 (5) - relating to the surrender of a portion of a water take upon transfer; and
- (b) Policy 4.46 – limiting consent duration to five years (in certain areas)

12.3 The following provisions of the Plan included in Attachment 1 should be amended as proposed for the reasons set out in the body of this evidence.

Gerard Willis

4 February 2013

## ATTACHMENT 1

### Provisions Proposed to be Amended

#### Objectives

*The Objectives of this Plan must be read in their entirety and considered together. No single Objective has more importance than any other, but in any particular case some Objectives may be more relevant than others.*

- 3.11 Water is available for sustainable abstraction or use (including the use of water's assimilative capacity for the dilution and disposal of wastes) to support a variety of economic and social activities and maximum social and economic benefits are obtained from the efficient storage, distribution and use of water which is available for abstraction.
- 3.x Recognise that existing water takes and discharges contribute to social and economic well-being and in some cases significant investment relies on the continuation of those takes and discharges, including rural-based activities such as agriculture and perishable food-processing.
- 3.y The value of agriculture to community well-being is able to be maximised through land use and associated discharges that allows for food processing and water storage, conveyance and irrigation infrastructure to be provided and used efficiently.

#### Strategic Policies

- 4.1 Lakes, rivers, wetlands and aquifers will meet the freshwater outcomes set in Sections 6-15 within the specified timeframes. If outcomes have not been established for a catchment then each type of lake, river or aquifer will meet the outcomes set out in Table 1 by 2023.
- 4.6 *Where a water quality or quantity limit is set in Sections 6-15, resource consents will generally not be granted if the granting would cause the limit to be breached or further over-allocation to occur. New consents replacing expiring consents may be granted subject to other relevant policies of this Plan.*

#### Table 1a

##### Advisory Note

In determining whether a river meets the outcomes of this Table, Environment Canterbury will consider available monitoring/modelling data and apply expert opinion using, in particular, an approach of averaging monitoring/modelling results both temporally and spatially.

#### Table 1b

##### Advisory Note

In determining whether a lake meets the outcomes of this Table, Environment Canterbury will consider available monitoring/modelling data and apply expert

opinion using, in particular, an approach of averaging monitoring/modelling results both temporally and spatially.

**Table 1c**

Management unit	Subunit	Appearance & Palatability	Health indicators				Groundwater pressure		Groundwater levels
		Guideline value for any aesthetic determinand [DWSNZ*]	Nitrate-Nitrogen Concentration (mg/L)		Escherichia coli [median concentration of organisms per 100ml of water)	All other inorganic or organic determinands health significance [DWSNZ] (%Max Acceptable Value) <u>Average</u>		Salt water intrusion	
			Max	Average					
Coastal confined Gravel Aquifer System		<u>Average W</u> water quality in each aquifer is maintained at least in the state recorded or reasonably deduced in the three years prior to 1 November 2010				The upward hydraulic pressure gradient is maintained all aquifers		There is no landward movement of the salt-freshwater interface and saltwater contamination of freshwater aquifers is avoided	
Unconfined gravel aquifers	<u>Shallow groundwater predominantly recharged by soil drainage</u> <u>1. All shallow groundwater; and</u> <u>2. Deep groundwater predominantly recharged by soil drainage</u>	Within the Guideline value	<11.3	≤5.6	<1	≤ 50% MAV			Long-term average groundwater water levels, and the flow and levels in surface bodies is maintained
	Deep groundwater predominantly recharged by rivers	<u>Average W</u> water quality is maintained at least in the state recorded or reasonably deduced in the three years prior to 1 November 2010							

**Activity and Resource Policies**

- 4.11 Any discharge of a contaminant into or onto land where it may enter groundwater:
- (a) will not exceed the natural capacity of the soil to treat or remove the contaminant; and
  - (b) will not exceed available water storage capacity of the soil; and
  - (c) will not result in the accumulation of pathogens, or a persistent or toxic contaminant that would render the land unsuitable for agriculture, commercial, domestic or recreational use.
  - (d) where meeting (a), (b) and (c) this is not practicable the discharge will:
    - (i) meet any nutrient allowance in Sections 6-15 of this Plan;
    - (ii) utilise the best practicable option to ensure the size of any contaminant plume is as small as is reasonably practicable, and
    - (iii) ensure there is sufficient distance between the point of discharge, any other discharge and drinking water supplies to allow for the natural decay or attenuation of pathogenic micro-organisms in the contaminant plume;
    - ~~(iii) not result in the accumulation of pathogens, or a persistent or toxic contaminant that would render the land unsuitable for agriculture, commercial, domestic or recreational use or water unsuitable as a source of potable drinking water or for agriculture.~~

- (v) not raise groundwater levels so that land drainage is impeded; and
  - (vi) not result in groundwater quality exceeding maximum acceptable values for determinands of health significance or guideline values for aesthetic determinands as including in the Drinking Water Standards for New Zealand 2005.
- 4.46 Subject to Policy 4.47, Enable the taking of water for group or community drinking water supplies by not requiring compliance with any minimum or residual flow or partial restriction conditions and the environmental flow and allocation regime for surface water or groundwater allocation block limits in respect of:
- (a) stock drinking needs (in accordance with Section 14(3)(b) of the Act); and
  - (b) group or community drinking water supplies provided water supply is managed to restrict the use of water from those supplies during periods of low flow or water levels.
- 4.47 Where the rate of take or volume of water consented for abstraction from a catchment exceeds the environmental flow and water allocation regime for surface water or stream depleting groundwater, or the groundwater allocation limit for that catchment, any further allocation of water is limited to:
- (a) any abstraction necessary to meet community drinking needs and stockwater (provided all reasonable measures are taken to ensure efficient take and use); and
  - (b) the replacement of existing resource consents (including takes for group or community water supplies) at the same rate of take and the same or a lesser annual or seasonal volume, provided there are significant and enduring improvements in the efficiency of water use and reduction in any adverse effects where such efficiencies and reduction in adverse effects is reasonably practicable.
- 4.52 The discharge of water resulting from moving water from one catchment or water body to another ~~does not~~:
- (a) Does not facilitate the transfer of fish species, plant pests or unwanted organisms into catchments where they are not already present;
  - (b) Takes into account Ngāi Tahu values as articulated in the Ngāi Tahu Freshwater Policy 1999;
  - (c) Avoids significant Adversely affects on the natural character of the receiving water;
  - (d) Does not compromise the ability of Adversely affect existing drinking water treatment systems to the extent that they are no longer able to effectively treat the water to achieve the standards set out in the drinking water Standards for New Zealand; and
  - (e) Adversely affect Maintains potential for fish migration where it exists.

4.53

*Advisory note: Where the introduction of water from outside the catchment is facilitated by way of a plan change, that plan change will also introduce the new or revised environmental flow and allocation regime referred to in this policy.*

- 4.61 To prevent the flow falling below a minimum flow for the catchment, due to abstraction, partial restriction regimes for surface water shall:
- (a) have a single flow monitoring point for the whole catchment that all abstractors are referenced to, with additional flow monitoring points that some or all abstractors are subject to, should the hydrology of the surface water body justify it;
  - (b) provide for groups of water permit holders in the same sub-catchment to share water when takes are operating under partial restrictions; and
  - (c) not induce the flow to fall below the minimum flow due to abstraction and be based on a stepped or pro rata restriction regime that applies equally to all takes within the allocation block unless an alternative, differentiated approach is:
    - (i) Specified in a relevant sub-regional section; or
    - (ii) Warranted on the basis of minimising overall impact on food production and processing.

## Rules

- 5.70 The discharge of any liquid or sludge from any industrial or trade process, excluding sewage, into or onto land or into or onto land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.69 is a restricted discretionary activity.

The CRC will restrict the exercise of its discretion to the following matters:

1. The effect of not meeting the condition or conditions of Rule 5.69;
2. Measures to avoid, mitigate or remedy adverse effects on aquatic ecosystems and human or animal drinking water;
3. Measures to store liquid or sludge and application rates;
4. The adequacy of design, construction, systems and management processes to minimise fugitive discharges from the liquid/sludge storage and disposal system; and
5. The extent to which the proposed activity is consistent with the objectives and policies of this Plan relating to Ngai Tahu values, human and animal health and drinking water quality, including Policy 4.11.

- 5.102 The taking and use of groundwater where the point of abstraction is outside of a Groundwater Allocation Zone on the Planning Maps is a non-complying discretionary activity.

- 5.103 The taking and use of groundwater that does not meet one or more of the conditions 4~~2~~ to 4 in Rule 5.101 is a non-complying activity.