Proposed
Hurunui and Waiau River Regional Plan;

And Proposed Plan Change 3 to the Canterbury Natural Resources Regional Plan

Section 42A Report
September 2012

Planning

Prepared by

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1. Introduction

1.1 Author

1. My name is Elizabeth (**Liz**) Jane White. I am a Senior Planner at the Canterbury Regional Council. I hold a Bachelor of Arts with Honours in History, from the University of Canterbury, and I am currently studying towards a Masters Degree in Resource and Environmental Planning at Massey University.

2. I have over six years of experience in resource management planning in New Zealand. Prior to my current role I worked for four years at Hurunui District Council, in various policy planning and consents planning roles, and then as a consultant planner for Resource Management Group Ltd, a Christchurch-based planning consultancy. My experience includes the preparation, notification and reporting on, of a number of District Plan and private plan changes and other planning policy matters; attending Environment Court hearings and mediation; the preparation of resource consent applications, submissions and notices of requirements and consequently presenting evidence at council hearings; the processing of resource consents, and the provision of resource management advice to councillors, colleagues and the general public. I am an Associate Member of the New Zealand Planning Institute.

3. Because of my work for the Hurunui District Council, and having grown up in North Canterbury, I am familiar with the area covered by the proposed Hurunui and Waiau River Regional Plan and the District generally.

4. My involvement with the Proposed Hurunui and Waiau River Regional Plan ('**HWRRP**') and proposed Plan Change 3 to the Canterbury Natural Resources Regional Plan ('**NRRP**') began in January 2012, where I was engaged through my employer at that time – Resource Management Group Ltd - by the Canterbury Regional Council ('**CRC**') to act as the reporting officer on the HWRRP and the proposed Plan Change. Subsequent to this, I was employed by the CRC directly. Prior to January 2012, I was not involved in the preparation of the proposed Plan, or with the Hurunui Waiau Zone Committee.

5. Although this is a Council Hearing, I have read the Code of Conduct for Expert Witnesses contained in the Environment Court's Consolidated Practice Note dated 1 November 2011. I have complied with that Code when preparing my written statement of evidence and I agree to comply with it when I give any oral evidence.

6. The scope of my evidence relates to the planning framework proposed in the HWRRP, and to proposed Plan Change 3. I confirm that the issues addressed in this statement of evidence are within my area of expertise as an expert policy planner. I have discussed the preparation and adoption of the Hurunui Waiau Zone Implementation Programme and preparation of the HWRRP with Andrew Parrish (Principal Planner - Environmental Flows, Environment Canterbury) so as to gain a better understanding of the background to the HWRRP. Mr Parrish has also prepared the "Historical

Background and Process to Develop the Proposed Hurunui and Waiau River Regional Plan" part of the section 42A Report.

7. The data, information, facts, and assumptions I have considered in forming my opinions, and the reasons for the opinions that I express, are set out in the part of the evidence in which I express my opinions.

8. For the avoidance of doubt it should be emphasised that any conclusions reached or recommendations made in this report are not binding on the Commissioners. It should not be assumed that the decision-maker will reach the same conclusion or decision having considered all the evidence to be brought before it by the submitters.

9. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

10. The literature or other material which I have used or relied upon in support of my opinions is set out in **Appendix 1**.

1.2 Content of the Officer's report

11. This report is prepared under the provisions of section 42A of the Resource Management Act 1991 (RMA). Section 42A allows council officers to provide a report to the Hearings Panel on the HWRRP and allows the Hearings Panel to consider the report at the hearing.

12. This s42A Report seeks to set out the main principles and amendments sought in the relief from various submitters, and as such it does not outline each and every submission point in full detail. Further submissions are only referred to in this report where there is a reason given for the support or opposition to another submission point, and this reason has not been discussed by another submitter.

13. **Appendix 2** sets out the provisions of the HWRRP recommended to be amended as a consequence of submissions. **Appendix 3** sets out the provisions of Proposed Plan Change 3 (PC3) to the NRRP recommended to be amended as a consequence of submissions.

1.3 Explanation of terms and coding used in the report

ASM	Audited Self Management
CRC	Canterbury Regional Council or Environment Canterbury (ECan)
CWMS	Canterbury Water Management Strategy
DIN	Dissolved Inorganic Nitrogen
DRP	Dissolved Reactive Phosphorous
ECan Act	Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010
Headroom	Means the amount of room created below a specified limit. This term is applied to the water quality load limit. The headroom is the difference between the measured load and the load limit specified in the HWRRP.
HWRRP	Proposed Hurunui and Waiau River Regional Plan
HWZ	Hurunui Waiau Zone or Waiau Hurunui Zone (the area

	defined in the CWMS as the Hurunui Waiau Zone or Waiau Hurunui Zone. These terms have historically been used interchangeably; the Waiau Hurunui Zone is identical to the Hurunui Waiau Zone)
IDP	Infrastructure Development Plan
ISMP	Irrigation Scheme Management Plan
l/s	Litres per second
LBMP	Lifestyle Block Management Plan
m^3/s	Cumec (A measure of river flow. One (1) cumec is the equivalent to one (1) cubic metre per second or alternatively 1,000 l/s)
MALF or MALF7d	Mean Annual Seven Day Low Flow
NPSFM	National Policy Statement on Freshwater Management
NPSREG	National Policy Statement on Renewable Electricity Generation
NRRP	Natural Resources Regional Plan
PRPS	Proposed Canterbury Regional Policy Statement
RPS	Operative Canterbury Regional Policy Statement
WSAMS	Water Supply Asset Management Strategy
ZC	Hurunui Waiau Zone Committee (established under the Canterbury Water Management Strategy)
ZIP	Zone Implementation Programme

2. Context

14. The HWRRP is a regional plan specific to the zone which encompasses the Hurunui, Waiau and Jed River catchments. Its purpose, in accordance with s63(1) of the RMA, is to assist the CRC in carrying out its functions, in order to achieve the sustainable management of the water resource in this zone. The context within which the HWRRP sits is important in understanding where the Plan fits within the wider planning environment.

2.1 National Policy Statement for Freshwater Management

15. The National Policy Statement for Freshwater Management **("NPSFM")** came into effect on 1 July 2011. As set out in its preamble, fresh water is recognised as being essential to New Zealand's well-being, not only because of its environmental values, but also its economic, cultural and social values. Because of these various values, there is a challenge in managing the water resource to provide for all those values. The NPSFM therefore sets out directions for local government to manage water in an integrated and sustainable way, providing for economic growth within set water quantity and quality limits that are scientifically and socio-economically informed. This is so that environmental outcomes are achieved while providing certainty for investment. The NPSFM recognises not only the values associated with water use, but also its intrinsic values.

16. Under s67(3) of the RMA, the HWRRP must give effect to the NPSFM. The objectives and policies within the NPSFM are therefore discussed throughout this report, in terms of whether and how the HWRRP gives effect to them. A copy of those objectives and policies from the NPSFM that are referred to in this report are provided in full in **Appendix 4**.

2.2 National Policy Statement for Renewable Electricity Generation

17. The National Policy Statement for Renewable Electricity Generation **("NPSREG")** came into effect on 13 May 2011. It includes provisions intended to enable the sustainable management of renewable electricity generation, recognising its contribution to addressing the effects of climate change and in turn the wellbeing of New Zealand's communities and environment. The NPSREG, while not applying to the allocation and prioritisation of freshwater, (being matters for regional councils to address in a catchment or regional context), seeks to recognise the national significance of renewable electricity generation activities by providing for these activities, both new and existing. This is relevant to the provisions in the HWRRP that deal with infrastructure, as opposed to the allocation and prioritisation of freshwater. Under s67(3) of the RMA, the HWRRP must give effect to the NPSREG.

2.3 Operative and Proposed Regional Policy Statements

18. The Regional Policy Statement ('**RPS**') became operative in 1998. The HWRRP, as a regional plan, is required under s67(3)(c) to give effect to the RPS. Relevant provisions of the RPS are discussed in relation to the sections in this report that they are considered to be applicable to.

19. As the RMA requires that regional policy statements are reviewed every 10 years, a full review of the RPS began in 2006. This culminated in the notification of the Proposed Regional Policy Statement ('**PRPS**') on 18 June 2011. Following the submission and hearing process, decisions on the PRPS were notified on 21 July 2012. Under s66 of the ECan Act, appeals on the PRPS were limited by those who made a submission or further submission to the High Court on questions of law. As appeals were received on the PRPS, it will not be made operative until the resolution of the appeal process. The relevant provisions of the PRPS are discussed in relation to the sections in this report that they are considered applicable.

20. Under s66(2)(a) of the RMA, in preparing the HWRRP, the CRC must have regard to the PRPS. However, once it is made operative, it will be required, under s67(3)(c), to be given effect to. The relevance of this is that a number of the PRPS provisions that are relevant to the HWRRP, are not subject to appeal. In my view, this means that full weight should be given to them, because they are not subject to change before they will be made operative. Those provisions in the PRPS under appeal that are discussed in this report are limited to the following provisions:

    a. Objective 7.2.1

    b. Policy 7.3.2

    c. Policy 7.3.4

21. Because these three provisions are subject to appeal (on questions of law), it is my view that full weight cannot be given to them; however given that they are a significant way down the statutory path, I still consider significant weight can be given to them, as discussed in the legal submissions part of the section 42A Report.

22. A copy of those objectives and policies from the RPS and PRPS that are referred to in this report are provided in full in **Appendix 4**.

2.4 Canterbury Water Management Strategy

23. The sustainable management of water resources in the wider Canterbury region is a matter that has been considered extensively in recent years as part of the CWMS process. As noted in the preface to the CWMS, the increasing pressure on the water resource in the region had resulted in a highly adversarial approach to water allocation and management, infrastructure provision, and related land use management, with concern that this had led to sub-optimal outcomes (CWMS, p.1). The CWMS instead proposes a collaborative and integrated management approach, seeking to maximise opportunities for the region's environment, economy and community. In particular the CWMS identifies that a shift is required from effects-based management of individual consents, to integrated management based on water management zones, and managing cumulative effects of both water abstraction and land use intensification (CWMS, p. 7). It is intended that the targets set in the CWMS be advanced in parallel (CWMS, p. 8).

24. Under s63 of the ECan Act, in considering the HWRRP, particular regard must be had to the vision and principles of the CWMS.

25. As is discussed further in this report, some submitters have identified that the CWMS is not a statutory document, nor is the Plan required to give effect to the CWMS. While I accept that there is no requirement for the HWRRP to give effect to the CWMS, it is my opinion that the CWMS provides a comprehensive approach to sustainable management of the region's water resource, and identifies that:

    a. The previous approaches to management of this resource have not been the most appropriate way to achieve to achieve the purpose of the RMA in that they are expected to lead to "*unacceptable environmental, social, cultural and economic outcomes";*

    b. A new approach is therefore necessary to better manage this resource in order to enable people and communities to provide for their wellbeing and for their health and safety, while ensuring that the water resource is also able to meet the needs of future communities, its life-supporting capacity is safeguarded, and adverse effects resulting from water use are appropriately avoided remedied or mitigated.

26. I also note the comments made in the decision on the PRPS that I consider to be relevant:

    a. While s63 of the ECan Act requires that particular regard is had to the vision and principles of the CWMS, the Hearings Panel is "*…entitled to "have regard" to the rest of the CWMS…*" (p. 12);

    b. They considered it was appropriate to do so *"…because of the relevance of the content, because it has been endorsed by the Regional Council and all 10 territorial authorities in the region, and because it was designed to be incorporated into the planning instruments of the region*" (p. 12);

    c. The priorities identified in the CWMS "*…are a way of giving effect to the NPSFM*";

    d. Having regard to the CWMS "*does not imply that the [PRPS] should* necessarily *incorporate, or give effect to all of the content of it*", but that the Hearings Panel had done so "*to the extent that its content are*

the most appropriate way of achieving the objectives of the [PRPS] and the purpose of the Act".

27. A key approach within the CWMS for achieving its vision is the establishment of zone committees who are responsible for co-ordinating the development and review of an implementation programme for the zone (CWMS, p. 44).

28. The Engineers Collective (Submitter 69) seeks that weight is given to first order priorities under CWMS - environmental effects. It is my view that the HWRRP gives appropriate regard to the first order priorities of the CWMS, which includes the environment.

2.5 Zone Committee and Zone Implementation Programme

29. The Hurunui Waiau Zone Committee ('**ZC**') was established in 2010, as a joint committee of the Hurunui District Council and CRC, and in July 2011, adopted the Hurunui Waiau Zone Implementation Programme ('**ZIP**'). The ZIP contains a series of recommendations to both councils, as well as to developers and other parties on water management for this zone, that the ZC believes provide an integrated solution to achieve the CWMS principles, targets and goals (ZIP, p. 4).

30. Amuri Irrigation Company Ltd (Submitter 83) notes that the ZIP itself has no formal status under the RMA, and seeks that the HWRRP is "*recast",* to make it clear that the outcomes advanced within the ZIP cannot be advanced where they will, or have the potential to cut across the purpose of the Act. I agree that provisions within the HWRRP must ultimately achieve the purpose of the RMA. It is my view that the outcomes sought through the ZIP and advanced through the RMA framework of the HWRRP, are consistent with the purpose of the RMA, notwithstanding that I consider various provisions may require amendments so that they better achieve this purpose.

31. While there is no statutory requirement for the HWRRP to give effect to, or be consistent with the ZIP, in my view it is important to consider how any amendments to the HWRRP may ultimately impact on the implementation of the ZIP. This is necessary to ensure that appropriate regard is had (under s63 of the ECan Act) to the vision and principles of the CWMS in this decision-making process. This is because the ZIP is ultimately intended to give effect to the CWMS and the HWRRP is expected to give effect to the recommendations of the ZIP, by taking an integrated approach to the development and management of the water resource (ZIP, p.1). In other words, I believe that careful consideration needs to be given to how changes to the HWRRP may impact on the ZIP, and in turn, how the vision and principles of the CWMS are still to be achieved if such changes are made. In my opinion, it is particularly important to note that the HWRRP is only one part of the 'package' intended to implement the ZIP, with other non-statutory measures to be implemented alongside the regulatory measures proposed in the HWRRP.

32. It is also my view that the role of the ZIP and the consensus approach taken by the Zone Committee, including the consultation undertaken by the Committee, is a relevant consideration. This is because it is my view that the process undertaken and represented in the ZIP, and ultimately reflected in the HWRRP, has been about the community identifying the best way to provide for its own social, economic and cultural well-being of the Hurunui community, in relation to the management of its water resource, taking into account the

needs of future communities, and identifying bottom lines to ensure that the life-supporting capacity of the water itself is protected.

33. In my opinion, the ZIP ultimately informs how the purpose of the RMA is to be achieved in the context of this particular zone, its people and communities.

3. HWRRP Approach

3.1 Integrated Management

34. It is my opinion that the approach taken in the HWRRP is one of integrated management of the water resource, whereby as much as possible, activities are not considered in isolation. In my view there are a number of key matters that form part of this integration. While these are expanded on further in this report, the following section provides a high level overview of these matters and how they fit within the wider context of the HWRRP approach.

3.2 'More Water'

35. One of the key recommendations in the ZIP is the provision of 'more water' for irrigation. While the HWRRP specifies a target for irrigation (100,000ha), in my view this goal should not be viewed in isolation from the other objectives of Plan; namely, full irrigation of all economically irrigable land should not come at the expense of the environmental, cultural and social outcomes sought by the Plan.

36. The approach taken in the HWRRP in relation to irrigation is therefore to provide a framework with the goal of irrigating as much land as possible, with what is ultimately 'possible' being dependent on other matters. This approach allows for proposals to be considered in terms of how they fit into the zone-wide 'more water' goal rather than in isolation.

37. Concurrent with this, the HWRRP contains objectives related to getting the most use from the available water. This is reflected in the Plan provisions relating to efficiency, consent transfers, consent renewal processes, re-allocation of water and dual use. In particular, one of the ZIP recommendations is for the provision of more water for irrigation and augmentation of river flows to be associated with hydropower development, but not for hydropower development on its own (ZIP, p. 2).

38. Also linked to the provision of more water, is the effect that further allocation has on the reliability of supply for existing irrigators. This is addressed in a number of provisions within the HWRRP, including being a matter for discretion in the consideration of applications for water take consents, and is also something discussed within the ZIP in terms of how it has been considered in the proposed minimum flows.

3.3 Storage

39. Related to the provision of 'more water' is the necessity for storage. This is because water taken and stored during times of high flow, and used during times of low flow, ensures that minimum flows, required in order to meet environmental, cultural and social outcomes are maintained, whilst providing more water to meet economic outcomes sought by the HWRRP (and the ZIP and CWMS). In my view, without storage, very little is further 'enabled', and the vision of the CWMS is unlikely to be met.

40. However, storage also has environmental consequences that in turn need to be managed. While the ZC has considered proposals for, and feasibility of particular storage locations, any proposal will ultimately need to be considered on its merits. The Plan therefore sets up a framework for consideration of such proposals, while providing strong guidance around the effects that will need to be managed in order to deliver on the Plan's objectives. As part of this management framework, the area covered by the Plan has been divided into three zones – Zone A, Zone B and Zone C.

41. Zone B 'Infrastructure Development Areas' represents areas identified as suitable for the development of water storage infrastructure (HWRRP, p. 9). Zone A 'High Value Areas' represents areas where water storage should not be progressed, implemented through a prohibited activity status for damming or impoundment of water within these areas. This is because the environmental costs associated with storage in these areas are considered to outweigh any economic benefit (HWRRP, p. 9). Zone C 'Areas not identified as High Value or Infrastructure Development' are areas where either limited investigations have been carried out, or where storage may be appropriate only if a range of effects are addressed, and where it is demonstrated that storage within less sensitive areas (i.e. Zone B) is not able to proceed.

42. Of particular note, the inclusion of Lake Sumner and the South Branch of the Hurunui River within Zone C, where damming is a non-complying activity, rather than prohibited, has drawn a number of submissions.

3.4 Water Quality

43. The HWRRP also recognises that increased irrigation enables land use intensification, which in turn can adversely affect water quality. A key recommendation within the ZIP is that nutrient load limits be set for the major rivers and their tributaries, with water quality for the Hurunui River at State Highway 1 to remain at about the same or better than the current standard, with improvements in nutrient management (ZIP, p. 2). It is recognised that in order for land intensification to occur whilst maintaining water quality, headroom will need to be created by existing land uses. The approach proposed is that water quality improvements be led by the community and industry, supported by a regulatory framework.

44. This is reflected in the provisions of the HWRRP, which requires that land owners or occupiers implement one of the specified Audited Self Management ('**ASM**') programmes. These programmes are defined in the HWRRP, with Schedule 2 setting out what is to be included in them. Of particular importance is that with the exception of a Lifestyle Block Management Plan ('**LBMP**'), which pertains to a particular kind of small-scale rural land use, these ASM programmes are collective agreements that will be signed up to by individual land owners/occupiers. The collective agreements can be established by a particular catchment, an industry, or irrigation scheme, thereby taking a community and industry-led approach.

45. In order to provide a lead in period for the establishment and implementation of these ASM programmes, and to allow time for headroom to be created simultaneously with land use intensification occurring, the HWRRP land use rules provide for a lead-in period up until 2017. A permitted activity status is therefore proposed for existing land uses where the owner/occupier has joined an ASM programme, and for changes in land use (intensification) where part of an ASM programme, and where the collective load limit has not been exceeded. Currently a load limit has only been set for the Hurunui

catchment. Prior to 2017, non-statutory measures undertaken by CRC are relied on to address water quality, alongside consideration of water quality effects on any water take consents.

46. Further to this, the HWRRP also takes a policy position whereby in this lead-in period and while collective agreements are being established and implemented, a 20% increase in DIN is provided for. After this time, it is expected and directed through the policies, that DIN will be reduced back to current levels. This proposed 20% allowance, at a policy level, has drawn a substantial amount of opposition from parties who consider that water quality should be maintained at its current levels or better, including in the short term. Conversely however, other submitters have also raised concerns that the water quality outcomes sought in the HWRRP are too restrictive to allow for land use intensification, and as such, consider that the irrigation targets of the Plan will be thwarted, in turn compromising the vision of the CWMS.

47. While reliable water quality data is available for the mainstem of the Hurunui River, data is less reliable for other rivers in the zone, and therefore setting accurate load limits through this planning process is acknowledged as being problematic (ZIP, p. 34). The HWRRP, as proposed, sets a load limit for the Hurunui Catchment, but not for the Waiau or Jed River catchments. However, the Plan recognises that these will need to be established in time and once scientific understanding improves (HWRRP, p. 9). The requirement for land owners or occupiers to join one of the specified ASM programmes also applies within any rural area in the HWZ, even those not subject to a load limit. In addition, the ZIP includes a number of non-statutory measures to address water quality and improve nutrient management in the HWZ which sit outside the HWRRP.

3.5 Priorities

48. The CWMS sets out the following priorities in relation to the water resource:

    a. First order priority considerations – the environment, customary uses, community supplies and stock water.

    b. Second order priority considerations – irrigation, renewable electricity generation, recreation, tourism and amenity.

49. It is my view that the HWRRP recognises and achieves these, in that the environment is given priority through several of the objectives which set environmental bottom lines, reflected in the flow and allocation regime. Community and stock water supplies are specifically addressed in Objective 1, and the Plan provides preference to these takes by excluding them from the allocation blocks and allowing them to continue (subject to conditions), when the minimum flow is reached.

3.6 Groundwater

50. The HWRRP recognises that groundwater takes near a surface water body can affect the flow or level of that surface water body, and therefore proposes an integrated approach to ensure that these effects are taken into account when allocating groundwater. This includes identification of a ‘River Zone’, within which takes are treated as having a direct hydraulic connection to surface water and are required to comply with the surface water allocation regime, unless it is demonstrated that there is not a direct hydraulic connection.

3.7 Water Allocation

51. All of the factors outlined above have also been factored in to the setting of the proposed minimum flows and water allocation regime. For example, the economic benefits of providing more water have been considered alongside the potential effects of water storage infrastructure, while increasing minimum flows in order to provide greater environmental benefits has been considered alongside the economic costs on reliability of supply for existing users. It is my view that a number of recommendations made by the ZC and contained in the ZIP, and which are reflected in the HWRRP's provisions, are ultimately value judgements that have been made, taking into account the costs and benefits associated with all of these factors.

52. The approach taken to water allocation within the Plan also differs from the current approach, in respect to the C Block, and to the activity status associated with water takes. This is because allocation beyond an A (or B) Block has historically been a non-complying activity, with the limit of the A (or B) block based on technical evidence establishing that the allocation of all water from within these blocks is generally appropriate. However, the approach taken within the HWRRP, is to identify a further block of water beyond the B Block limit (the C Block), and to provide for takes within this block as a discretionary activity, subject to consideration against a strong policy framework. This framework identifies a number of outcomes that any take of C Block water would need to meet. Then beyond the C Block Allocation limit, further water allocation becomes a prohibited activity. The allocation of a relatively large amount of water to this C Block is another matter that has drawn considerable comment from submitters.

4. Proposed Plan Change 3 to the NRRP

53. Proposed Plan Change 3 (PC3) to the NRRP was notified on 1 October 2011, at the same time as notification of the HWRRP. PC3 seeks to add explanatory paragraphs to the NRRP to identify provisions that will no longer apply in the HWZ, because these are regulated instead by the HWRRP.

54. Two submissions were received on PC3. Mr John Talbot (Submitter 1) and Meridian Energy Ltd (Submitter 80)[1], seek that consequential amendments are made to PC3 as result of changes that they seek to the HWRRP. Where such submission points are recommended to be accepted on the HWRRP, for the reasons set out elsewhere in this report, consequential changes required to PC3 are also recommended. These are outlined in **Appendix 3**.

55. I also note that the proposed Land and Water Regional Plan ('**LWRP**') was notified on 11 August 2012. I understand that Chapters 1, 4, 5, 6, 7 and 8 of the NRRP will be revoked once the LWRP becomes operative.

[1] These submitters also submitted on the HWRRP and therefore are referred to by their submitter number in relation to the HWRRP submission.

5. General Recommendations on Submissions

56. This section of the report makes a number of general recommendations on submissions, which due to the number and general nature of comments, are not identified individually. It also comments on submissions that deal with the Plan as a whole and the process for the development of the Plan.

57. A number of submitters seek the retention of various provisions in the HWRRP, as notified. Where amendments have been recommended to such provisions in response to other submissions, it is therefore recommended that the former submissions are accepted in part. Similarly, where changes are not recommended to any provision, it is therefore recommended that any submissions seeking their retention are accepted, and where it is recommended that such provisions are deleted, it is recommended that submissions seeking their retention are rejected. In addition, Mr Graham Clark (Submitter 76) opposes all provisions within the Plan. In my view, and for the reasons set out in this report in relation to the various provisions in the Plan, CRC should not withdraw the HWRRP.

58. A small number of submitters have questioned the consultation and decision making process of the HWRRP, including seeking further consultation on certain matters, that future consultation processes are specified in the HWRRP, that the HWRRP be independently reviewed by an outside organisation or panel before decisions are made[2], that the decisions be made in consultation with particular individuals[3] and that the mechanism of the final decision be included as part of the Plan.[4]

59. The process for preparation, consultation, and decision-making on regional plans such as the HWRRP is set out in Schedule 1 to the RMA and has been followed by this Plan. The Council's appointment of a Hearings Panel to hear submissions and make recommendations to the Council is in accordance with the RMA and individuals have had the same ability as other parties to make a submission on the HWRRP, as provided for under the RMA. In the future, consultation, such as that relating to a plan change, must also follow the consultation requirements of the statute as they apply at that time, and in my view it would be inappropriate to specify these within the Plan itself. This is because if changes are made to the legislation, the Plan may be inconsistent with the legislation. Similarly, although the consultation that extends beyond that required under the RMA may be appropriate, in my view it is up to the Council at the time to determine this, rather than the HWRRP committing any future council to a particular course of action. As such I recommend that these submissions are rejected.

60. Some submitters have requested changes to provisions within the HWRRP on the basis of meeting or achieving rules, policies or objectives within, or following the format of the NRRP. I note however that the HWRRP is not required to meet the provisions of the NRRP, as the HWRRP has its own objectives that the rules and policies within it are to implement. I therefore recommend that these submissions are rejected.

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[2] Mr Mark Eastmond (Submitter 41).

[3] Mr Paul Drake (Submitter 51).

[4] Mr Robert Foster (Submitter 126).

61. A number of submitters have also sought decisions requesting “clarity” over various matters. In general, it is considered that this report and those of other s42A report writers provides clarity in response to these submissions, and as such it is recommended that these submissions are rejected as they do not require amendments to the HWRRP. Where however it is considered that amendments to the HWRRP are required in order to provide clarity within the Plan itself, these are commented on in the relevant section of the report.

62. Environmental Defence Society (Submitter 119) seeks generally that the HWRRP is amended to give effect to the NPSFM and be consistent with Part 2 of the RMA, on the basis that the Plan will not preserve the natural character of rivers and their margins, and does not set robust allocation limits and water quality limits to give effect to the NPSFM. It is my opinion, for the reasons set out in this report in relation to its various provisions, that the Plan, with the amendments recommended, does give effect to the NPSFM and achieve the purpose of the RMA.

63. DairyNZ Inc (Submitter 134) seeks that the Plan’s objectives are consolidated up-front, and measurable objectives are developed to support the narrative statements. I recommended that this is rejected, as there is no requirement for objectives to be consolidated, and in my view, the links between the policies and their overarching objective are clearer when set out in the manner proposed in the HWRRP. Further, objectives should be used to describe the end state of the resource or the environmental value being sought[5]. While quantifiable objectives may be simpler to measure, it is my view that strictly quantifiable rather than narrative / descriptive objectives do not allow for a qualitative approach to be taken to what is sought to be achieved. It is further my view that the RMA does not require that objectives are either quantitative or qualitative, with the statutory test being simply whether they are the most appropriate way to achieve the RMA’s purpose.

64. Mr John Talbot (Submitter 1) states that throughout the HWRRP, the terminology ("take, use, dam, divert and discharge") of the RMA is not used consistently when describing activities, noting that provisions may only be made in respect of the activities referred to in the RMA. The submitter therefore seeks that terminology in the HWRRP that does not reflect the RMA activities of take, use, dam, divert and discharge is amended, and that amendments are made to ensure the appropriate range of activities are referenced in the policies and rules. While I generally consider that it is appropriate to have consistent terminology, the submitter has not identified provisions in the Plan that use additional terminology and I am not aware of any that do so. As such I have not recommended any changes relating to this.

6. Part 1 - Introduction Section

65. The HWRRP is separated into the following five parts:

    a. Part 1 – Introduction

    b. Part 2 – Objectives and Policies

[5] Quality Planning website - http://www.qp.org.nz/plan-development/policy-framework.php, downloaded 17 April 2012.

c. Part 3 – Rules

d. Part 4 – Table 1: Environmental Flow and Allocation Regime

e. Part 5 – Definitions, Schedules and Maps

66. The Introduction section includes a discussion on the purpose of the Plan and its scope, the resource management issues, the overall vision for sustainable management of the water resource within the zone, and an explanation as to how the HWRRP addresses the issues identified.

67. A number of changes sought to Part 1 of the HWRRP are effectively consequential changes relating to submissions on other parts of the Plan. For that reason, they are not commented on further in this section. Where changes are recommended to Parts 2 – 5 of the HWRRP in response to submissions, it is also recommended that Part 1 is amended accordingly, and that submissions relating specifically to Part 1 are accepted, or accepted in part to the extent that changes are recommended to the other parts. Recommended changes are shown in **Appendix 2**. Conversely, where it is not recommended that changes are made to Parts 2 - 5 in response to submissions, it is also recommended that related changes sought to Part 1 are rejected. Some specific changes sought to Part 1 are also discussed within the section of this report to which they relate and are therefore not discussed further here.

68. The following sub-sections therefore address those submissions not otherwise covered by the above general recommendations.

6.1 'Scope of this Plan and the area to which it applies'

69. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) consider that there is some confusion in the HWRRP about the scope of the Plan in relation to discharge of water, and the use of land, seeking that the following additions are made to better clarify the activities that this plan covers:

> "*the discharge of water (in accordance with section 15(1) of the Resource Management Act) <u>which has been used</u> for non-consumptive uses; and*"
>
> "*the use of land (in accordance with section 9(2) of the Resource Management Act) in the Nutrient Management Area shown in Map 4 <u>which may result in the discharge of nitrate-nitrogen or phosphate to water</u>*."

70. It is my view that these amendments are appropriate as they provide greater clarity over the scope of the Plan, and as such will avoid potential confusion over what activities are covered by this Plan, and what are addressed in the NRRP (or LWRP)[6].

[6] For completeness I also note that if these amendments are accepted, the consequential changes sought by these submitters to the introductory paragraph to 'Part 3 – Rules', and by Meridian Energy Ltd (Submitter 80) to PC3 are also required. These are outlined in Appendix 2 and Appendix 3 respectively.

6.2 'The Resource Management Issues'

71. Ngāi Tahu Property Ltd (Submitter 121) seeks that that an additional paragraph be added to this section of the HWRRP, and a new Issue (3A) added, relating to the importance of larger freshes and floods in the Waiau and Hurunui Rivers, and how the taking and storage of water needs to ensure that the benefits of these freshes and floods are retained. In terms of including a new issue, it is my view that the specific wording sought by the submitter is not formulated as an issue statement, and that the underlying issue raised by the submitter is that flow variability including important freshes and floods, is modified by large abstractions of water, which in my view is adequately covered in Issue 3 already. I do however consider that further explanation around this aspect of Issue 3 is helpful. I consider that more succinct wording, consistent with that recommended for various objectives and policies in the HWRRP, is more appropriate, and therefore recommend the following wording is added to paragraph six:

> "*Larger freshes and floods in these rivers are also important for scouring and flushing periphyton accumulations, mobilising gravel, triggering flow-dependent life stages processes such as fish migration and removing exotic vegetation from gravel riverbeds*."

72. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seek that the fifth paragraph is amended as follows, and in my view is appropriate:

> "*For Ngāti Kuri the Waiau-uha (the Waiau River) is connected through whakapapa to ~~has a cosmological link with the~~ Waiau-toa (the Clarence River)."*

73. Federated Farmers of New Zealand (Submitter 123) seeks, in relation to the sixth paragraph, that it is amended to acknowledge the potential for conditions for kayaking and jet boating to improve, or at least be more controllable, as a result of water infrastructure development. In my view this is not appropriate within this section of the Plan, as its purpose is to identify potential issues. Royal Forest and Bird Protection Society (Submitter 136) seeks that the paragraph refer to "river birds" rather than "riverbed nesting birds" on the basis that braided rivers are important for feeding as well as for nesting. In my view the amendment is appropriate and is supported by the evidence of Dr Hughey.

74. A number of submitters seek changes to the tenth paragraph[7]. The changes sought largely relate to better clarifying that it is not irrigation in itself that result in higher levels of nitrate and phosphate, but the more intensive land use enabled by such irrigation, and that this contributes to, but is not solely responsible for nuisance periphyton or toxic cyanobacteria. Royal Forest and Bird Protection Society (Submitter 136) also seeks that the statement "*Nitrate can also be toxic to fish and invertebrates"* is added within this paragraph. In my view the majority of changes sought are appropriate and I recommend the following wording amendments:

[7] Ravensdown Fertiliser Co-operative Ltd, Irrigation New Zealand Inc, Ngāi Tahu Property Ltd, Federated Farmers of New Zealand and Hurunui Water Project Ltd (Submitters 102, 104, 121, 123 and 127).

> "*Taking water for irrigation ~~has altered~~ alters the natural flow pattern below the intake point, resulting in lower river flows. ~~and~~ Higher intensity of land use that is enabled through the taking of water for irrigation may also result in higher levels of nitrate and phosphate entering water bodies ~~as a result of higher intensity land use~~. Higher concentrations of nitrate and phosphate in water bodies can ~~then cause~~contribute to the growth of nuisance periphyton or toxic cyanobacteria, ~~that~~ which may impact~~s~~ on recreational uses, amenity values and the mauri of rivers. Nitrate can also be toxic to fish and invertebrates*.

75. Several submitters also seek changes to the eleventh paragraph[8], as its wording conflicts with preceding paragraphs which suggest that the current use of water has resulted in degradation. It is my understanding that some parties consider that the current state of the river has compromised its various values, whereas others do not. In my view it is not necessary for the Plan to make a statement one way or the other, and therefore I consider that the paragraph should be amended as follows, based on the various changes sought by these submitters:

> "*~~The current intensity of land and water use has not compromised environmental and recreational values to date, and if managed carefully~~ Careful management is required to ensure that additional abstraction and subsequent expansion of irrigated land area can be undertaken in a way which maintains and improves environmental, cultural and recreational values while providing the maximum benefit to all water users."*

76. In relation to paragraph 13, Te Rūnanga o Ngāi Tahu and others (Submitter 116) seek that the following statement is added: "*Where these waters are to be mixed, this mixing should only occur in a culturally appropriate manner."* In my view this wording is appropriate as it is consistent with other parts of the Plan.

77. Paragraphs 14 and 15 provide a discussion on the issues associated with large scale water storage. Royal Forest and Bird Protection Society (Submitter 136) seeks that paragraph 14 is deleted and replaced with the following, which in my view is appropriate, as it is clearer and it better reflects the objectives and policies of the Plan:

> "*There are some parts of the catchments where the natural, cultural and social values are so high that the construction of water storage and other infrastructure is deemed inappropriate. There are other parts where the construction of water storage would be too costly and difficult due to geotechnical issues."*

78. In relation to paragraph 15, several submitters[9] seek that the following statement is deleted: "*However, developing storage infrastructure in areas where the environmental effects are less is expected to be significantly more expensive than storage infrastructure in the environmentally sensitive areas."*

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[8] Water Rights Trust Inc, Whitewater Canoe Club Inc and Whitewater New Zealand Inc, Mr Ian Fox, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 48, 95, 109, 113, 136 and 139).

[9] As per previous footnote.

Meridian Energy Ltd (Submitter 80) seekS that amendments are made to the paragraph as follows:

> "*However, developing storage infrastructure in areas where the environmental effects are less ~~is expected to~~ may be significantly more expensive than storage infrastructure in some of the environmentally sensitive areas".*

79. In my view, these changes provide greater clarity, and are more appropriate than removing the paragraph in its totality.

80. Royal Forest and Bird Protection Society (Submitter 136) also seeks changes to the preceding sentences in paragraph 15. I generally consider that the changes sought provide clarity and better reflect the objectives and policies of the Plan, and recommend the following wording (this does not remove all of the wording sought by the submitter, which I consider should be retained):

> "*There are other areas in the catchment where ~~it has been identified that~~ there are fewer environmental, cultural and geotechnical issues. In these areas, with appropriate mitigation, storage projects ~~proposals~~, whether in-stream, or out of-stream, are more likely to ~~be able to be progressed with fewer~~ have acceptable effects on the environment...*"

81. Water Rights Trust Inc (Submitter 48) seeks that the following statement is added to the paragraph: *"In assessing the cost of any particular storage infrastructure option against the environmental effects, consideration should be given to the vision and principles of the CWMS and in particular the first order priorities."* It is my view the purpose of this section of the Plan is to outline the issues that the Plan provisions seek to address. In my view the changes sought do not assist in outlining the issue and should be rejected.

Issue 1

82. In relation to Issue 1, changes are sought by Irrigation New Zealand Inc and Federated Farmers of New Zealand (Submitters 104 and 123) relating to irrigation being used to enable agriculture and horticulture activities to diversify and produce more consistent volume and quality, rather than simply producing 'more'. It is my view that irrigation is fundamentally about these activities producing 'more', but I agree that this is also about diversification and consistency, and therefore recommend the following changes:

> "*Economic growth of North Canterbury is highly dependent on agriculture and horticulture activities. Irrigation can enable these activities to produce more and diversify and therefore increase the gross domestic product of North Canterbury. For irrigation to be effective, reliable water needs to be available at critical times of the year."*

83. New Zealand Pork Industry Board (Submitter 112) seeks changes to the wording of the issue that in my view extend the issue beyond irrigation, and are unnecessary as the issues associated with other water uses such as stock drinking water supplies are already addressed in Issue 6.

84. Royal Forest and Bird Protection Society (Submitter 136) seeks that Issues 1 and 2 are swapped, and that changes are made to Issue 1 on the basis that the current wording represents a value judgement, which should be avoided. In my view, these changes are not appropriate. Firstly, in my view the issues are not 'ordered' in terms of priorities, and Issue 1 leads into Issue 2 as it is the demand for water (Issue 1) that leads to the reduction in surface flows (Issue 2). Secondly, I do not agree that value judgements should be avoided. In my view, planning is about making such judgements, and these are made in respect to other issues (for example Issue 5 refers to a value judgement that in some areas environmental effects will not be able to be adequately mitigated).

Issue 2

85. Department of Conservation (Submitter 90) seeks additions to Issue 2 that in my view are not necessary. This is because they are matters essentially affected by water allocation (and therefore covered by Issue 3), or they add additional examples that in my view are not necessary, or they are better addressed by changes sought by other submitters.

86. Amuri Irrigation Company Ltd (Submitter 83) seeks that the following sentence is added to Issue 2: "*Reduced assimilative capacity and a greater propensity for the environmental flow thresholds to be reached has the potential to adversely effect existing, lawfully established, abstractions, diversions and uses of water*". In my opinion this should be rejected on the basis that the matter that is raised is effectively a consequential effect of the other matters, not a direct effect of the reduction in surface water flow, which is what the issue relates to. I also note that the suggested wording does not grammatically flow from stem of this issue.

87. Whitewater Canoe Club Inc and Whitewater New Zealand Inc, and Mr Ian Fox (Submitters 95 and 109) seek that 7th bullet point of Issue 2 also include tributaries of the Hurunui and Waiau rivers. Royal Forest and Bird Protection Society (Submitter 136) seeks that this bullet point refers to "*activities including".* I therefore recommend the following wording to address these submissions:

> "*Recreationally important flows ~~in the mainstem of the Hurunui and Waiau Rivers~~ for activities including kayaking, jetboating, swimming and salmon and trout fishing."*

88. Federated Farmers of New Zealand (Submitter 123) seeks that Issue 2 is amended to acknowledge that with good water management, many of the potential adverse effects listed will not materialise. In my view, this is not appropriate as the purpose of this section of the Plan is simply to identify the issues that the Plan seeks to manage. Good water management is one way to *address* the issue, and this is consistent with the aims of the Plan in regards to matters such as efficiency, which are discussed in other sections of the Plan.

Issue 3

89. In relation to Issue 3, Royal Forest and Bird Protection Society (Submitter 136) seeks the following additional wording that I consider is helpful in identifying what the issue is:

> "*The natural flow variability is modified by large abstractions for out of stream uses. This can for example reduce natural character, increase the build up of weeds on the bed, reduce aquatic habitat and allow nuisance algae to build up.*"

Issue 4

90. In relation to Issue 4, Amuri Irrigation Company Ltd (Submitter 83) seeks various amendments. In my view, some of the changes sought are not statements of the issue, but a description of how the issue might be addressed, and are therefore not appropriate. However I consider that the other changes sought provide clarity and therefore recommend the following:

> "*Existing abstractors require reliable water in order to operate their existing farming operations and to maximise the benefit from this water. As more water is allocated within each allocation block the reliability of all water users ~~is~~ can be reduced."*

Issue 5

91. In relation to Issue 5, Whitewater Canoe Club Inc and Whitewater New Zealand Inc, and Mr Ian Fox (Submitters 95 and 109) argue that while the statement reflects increased irrigation negatively impacting the environment, it should also recognise the potential loss in recreation as a consequence. In my view, this is not appropriate within this issue, as it is not the storage in itself that potentially affects recreation, but the changes in flows resulting from storage, which are addressed in Issue 3. Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 113 and 136) seek that the second bullet point is deleted because of the limited assessment of costs. However, it is my view that as this section of the Plan outlines issues that its provisions seek to address, the removal of this bullet point would not assist in outlining the issue, which only suggests that these *may* arise.

92. Royal Forest and Bird Protection Society (Submitter 136) also seeks that "*To effectively irrigate additional land"* is replaced with *"The expansion of irrigation"* in the Waiau Hurunui Zone and that "*will"* is replaced by "*would"* in the stem of the issue and in bullet point 1. In my view, the phrase 'effectively irrigate' is appropriate because it reflects not only that the expansion of irrigation is sought, but that it is effective. The replacement of "*will"* with *"would",* in my view is appropriate in relation to bullet point 1 but makes less sense in relation to the stem. Federated Farmers of New Zealand (Submitter 123) seeks that bullet point 3 refer to "*integrated*" development, which in my view is appropriate and provides further clarity on what the Plan provisions seek to achieve. I therefore recommend the following wording:

> "*To effectively irrigate additional land in the Waiau Hurunui Zone will require the storage of water, but:*

- *The damming of water in some parts of the Hurunui and Waiau catchments ~~will~~ would have environmental effects that cannot be adequately mitigated.*
- *….*
- *The taking of water at higher flows and the development of infrastructure to store this water, if not undertaken in a comprehensive and integrated manner….*"

Issue 8

93. In relation to Issue 8, Amuri Irrigation Company Ltd (Submitter 83) seeks that additional matters are added pertaining to potential effects on existing irrigators. However, in my view these are not appropriate, as they are consequential effects of the issue, and not part of the issue itself. In addition, if the issue itself is addressed, as proposed through the Plan's provisions, and the issue identified is avoided, these consequential effects will not arise. Ngāi Tahu Property Ltd (Submitter 121) seeks that the issue statement is substantially refined, and in my view the changes are inappropriate as they are too narrow to adequately define the issue.

94. Federated Farmers of New Zealand (Submitter 123) seeks changes to the stem of the issue as follows: "*If ~~With~~ further irrigation development is not properly managed in the Hurunui, Waiau and Jed catchments, there is a risk that nutrients in water bodies may reach concentrations that*:." Irrigation New Zealand Inc (Submitter 104) seeks similar changes. In my view these changes should be rejected as the purpose of this section of the HWRRP is to identify issues that need to be properly managed in order to avoid the potential effects identified, and therefore it is not necessary to state, when identifying the issue, that such effects will only arise if the issue "is not properly managed".

95. Ravensdown Fertiliser Co-operative Ltd (Submitter 102) seeks changes to the stem of Issue 8, some of which, in my view, are not worded as an issue statement. However the intent of the wording of the submission is considered to better reflect that the issue is not the irrigation of land in itself, but the change in land use associated with the irrigation, and I therefore recommend the following changes:

> "*With land use changes resulting from further irrigation development in the Hurunui, Waiau and Jed river catchments nutrients in water bodies may reach concentrations that:…"*

96. Federated Farmers of New Zealand (Submitter 123) seeks that the third bullet point, referring to trout habitat, is deleted, on the basis that trout habitat is already covered in the amenity and recreation bullet points. For similar reasons, Irrigation New Zealand Inc (Submitter 104) seeks that "*trout habitat*'' is replaced with ''*native fish habitat*". Department of Conservation (Submitter 90) seeks that the bullet point be extended to cover "*habitat for native fish and aquatic invertebrates, as well as habitat for introduced sports fish, such as trout and salmon".* In my view while a decrease in trout habitat may also affect amenity and recreational use of the river, it is appropriate to include both bullet points, particularly as s7(c) and s7(h) of the RMA are separate considerations. I also consider it appropriate to include native fish habitat, and salmon, and recommend wording consistent with other parts of the Plan (as

sought in a general submission by Ngāi Tahu Property Ltd (Submitter 121)) as follows:

> "*Decreases ~~trout~~ habitat for native fish, salmon and trout."*

97. Department of Conservation (Submitter 90) seek that the second bullet point of Issue 8 refer to riverbed bird aquatic food supplies "*and habitats*". It is not clear to me how nutrient concentrations within the water would affect riverbed bird habitats. The submitter also seeks the following additional bullet point: "*Cause algal blooms which threaten native fish, aquatic plant and aquatic invertebrate communities and populations*." In my view, this is not necessary as it is adequately covered by the other points.

New Issue

98. Meridian Energy Ltd (Submitter 80) seeks that a new issue (Issue 9) is added to the HWRRP and consequentially a paragraph added to this explanatory section, relating to renewable electricity generation. I agree that it is appropriate to discuss the issues associated with renewable electricity generation as they pertain to the water resource in this area, and to include an additional issue in this regard. However, the second part of the suggested wording for Issue 9 is not formulated as an issue statement, nor are parts of the proposed explanation. I therefore recommend the following wording, on the basis that it better reflects the issue, and is more succinct:

> "*Currently access to drinking and stock water … and stock drinking water needs.*
>
> *The benefits of renewable electricity generation, including hydro-electricity, are significant in addressing increasing regional energy demands, and contributing to the Government's target for 90% of New Zealand's electricity generation to be from renewable energy resources by 2025. Water resources suitable for hydro-electricity generation are however limited in their location. In addition, most of the electricity used in the upper South Island is presently "imported" from further south, or from the north when hydro storage in the South Island is relatively low. This results in electricity losses during transmission to the upper South Island; relatively higher regional electricity market prices compared with many other parts of the country; and increasing exposure to the risk of insufficient supply during periods of low rainfall and reliance therefore on transmission from the North Island.*
>
> *The resource management issues for the Hurunui, Waiau and Jed river catchments therefore addressed by this Plan are…"*
>
> "*Issue 9*
>
> *Electricity demand exceeds generation in the upper South Island making the area heavily dependent on importing electricity supply from elsewhere. Water resources that may be suitable for hydro-electricity generation are limited as to where they can be located"*

6.3 'The Vision for Sustainable Management of Water Resources in the Hurunui and Waiau Zone'

99. This section of Part 1 provides a summary of the CWMS process and its principles, and the subsequent ZC process including development of the ZIP.

100. Some submitters have sought changes to this section of the Plan, to reflect amendments sought to other parts of the Plan. While I accept that some changes to the provisions of the HWRRP may be appropriate that differ from the position in the ZIP, in my view this section of the Plan should simply be consistent with what is stated in the CWMS and the ZIP. Therefore, in my view, these submissions should be rejected, on the basis that these changes would then not accurately record the process, of the CWMS or ZIP.

101. Related to this, Federated Farmers of New Zealand (Submitter 123) seeks that the list of features from the CWMS is included in this section, to assist with its interpretation. In my view this is not necessary, as these features have already been used to assist in identifying the outcomes that the HWRRP seeks to achieve, and including the list is therefore superfluous.

102. Royal Forest and Bird Protection Society (Submitter 136) seeks that reference is made within this section to the NPSFM, particularly its direction to set enforceable quality and quantity limits. While the Plan is required to give effect to the NPSFM, I do not consider this is an appropriate place within the HWRRP to refer to it. In addition, I note that there are a number of matters within the NPSFM which need to be addressed by this Plan, and singling out one matter only is potentially misleading. The submitter also seeks that the first paragraph is amended to refer to the CWMS partnerships as being between "*local and regional government, Ngāi Tahu, environmental and recreational interests, rural industry interests and the wider public.*" In my opinion it would be misleading to suggest that public consultation on the CWMS amounted to a 'partnership', and the other suggested changes lack the clarity provided by the current wording. However I recommend that 'recreational' interests be included and that acknowledgment is made of the wider public participation, as follows, consistent with the CWMS (p.19):

> "*The Canterbury Water Management Strategy was developed between 2004 and 2010 as a key partnership between Environment Canterbury, Canterbury's district councils and Ngāi Tahu as well as key environmental, recreational and industry stakeholders. The Strategy also involved extensive consultation with stakeholders and the general public. The Strategy*…"

6.4 'How this Plan Responds to the Resource Management Issues and the Hurunui Waiau Zone Implementation Programme'

103. This section of Part 1 provides an explanation of how the identified issues are addressed through the Plan's provisions. It is therefore my view that amendments to this section are generally appropriate where they provide greater clarity over the approach taken in the HWRRP, or where other changes recommended necessitate consequential amendments. As such, where other changes are sought, I recommend that these are rejected.

104. In relation to the bulleted point (5) under the main title to this section, Ravensdown Fertiliser Co-operative Ltd and Hurunui Water Project Ltd (Submitters 102 and 127) seek changes to refer to best practice[10]. I consider that reference to best practice is appropriate, and recommend wording consistent with Policy 5.2 (if retained in its current form) as follows:

> "*5. Managing the cumulative effects from non-point source discharges from existing and new land uses <u>through best nutrient management practices</u>, to ensure nutrient concentration in the mainstems of the Hurunui and Waiau rivers are maintained at current levels and improved over time*."

105. Meridian Energy Ltd (Submitter 80) seeks that an additional bullet point is added under the main title to this section, in relation to hydro-electricity generation. I consider it appropriate that reference is made to this activity, but as the provisions of the HWRRP seek that such an activity is considered in context of the overall goals of HWRRP, I recommend the following wording:

> "*<u>Providing a policy and rule framework to enable hydro-electricity generation, provided this is consistent with the irrigation, environmental, recreational and cultural goals of this Plan."</u>*

7. Community and Stock Drinking Water

106. It is acknowledged in Issue 6, that with increased demands for water within the zone, access to high quality and reliable supplies of human and stock drinking water could be at risk. In order to address this, Objective 1 in the HWRRP seeks that:

> "*People and communities of North Canterbury have ready access to high quality and reliable supplies of human and stock drinking water*".

107. In relation to this Objective I note that there are no submissions opposing this objective or seeking amendments to it.

108. I also consider that Obejctive 7.2.1 and Policy 7.3.4 of the PRPS are relevant to this matter and are reflected in the provision of the HWRRP. This is because in my view the HWRRP seeks to ensure that the fresh water resources are sustainably managed and provide for any existing or reasonably foreseeable needs for community and stockwater supplies.

109. Under s14(3) of the RMA, water takes for an individual's reasonable domestic needs and the reasonable needs of an individual's animals for drinking water are provided for. I also note that community supplies and stock water are first order priorities in the CWMS and quality drinking water is a supporting principle.

110. As noted in the HWRRP (p. 6), community distribution schemes for drinking or stock water, such as those of the Hurunui District Council, have previously had to compete for the same water resource as other water users. The HWRRP does not require these schemes to comply with the minimum flow

[10] Other changes sought by these submitters to this point are consequential amendments relating to other changes sought and for reasons discussed elsewhere are not recommended.

regime, when operated in accordance with a Water Supply Asset Management Strategy ('**WSAMS**') (Policy 1.5). In addition the HWRRP enables up to 200l/s of additional water to be abstracted from both the Hurunui and Waiau Rivers for such uses, to enable future growth (Policies 1.2 and 1.3).

7.1 Policies 1.2 and 1.3

111. Amuri Irrigation Company Ltd (Submitter 83) has lodged the only submission in opposition to Policies 1.2 and 1.3[11], and seeks that the following two requirements are included in the policy: "*The abstraction does not derogate from an existing, lawfully established take";* and *"The benefits of the abstraction outweigh the costs".* These amendments are sought on the basis that the policy has the potential to derogate from consented irrigation schemes and as there has been no explanation given for how the 200l/s has been derived[12], an assessment of the benefits and costs cannot be made. It is my view that the proposed policy is appropriate for achieving the objectives of the Plan, particularly Objective 1. In my opinion, the amendments sought by the submitter will hinder the achievement of the objective by placing additional restrictions on such takes, and in my view these amendments do not relate to the achievement of any of the objectives of the Plan, nor do they accord with the first order priority given to such takes in the CWMS. It is also questionable as to whether these additions would be appropriate in terms of providing for these supplies as directed in the PRPS.

7.2 Policy 1.4

112. Policy 1.4 seeks to provide for water for community or stock drinking supplies to be taken from the Jed River or a tributary of the Hurunui or Waiau Rivers, provided that: the abstraction will not induce the river to go dry; the frequency of flow events between 1.5 and 3 times the median flow will not be reduced; and native and salmonid fish passage will not be compromised. This policy is supported by several submitters[13].

113. Hurunui District Council (Submitter 88) seeks removal of part (c) of the Policy, on the basis that the protection of fish passage should not come at the expense of secure community and stock water supplies. Federated Farmers of New Zealand (Submitter 123) seeks deletion of parts (b) and (c) as they consider these are potentially inconsistent with s14(3)(b) of the RMA. In this regard, and as outlined above, I note that the Policy does not apply to water takes for an individual's domestic needs or for their animals' drinking water but to community schemes. Community and/or stock drinking water supply is

[11] Mr John Talbot and Federated Farmers (Submitters 1 & 123) seeks the policy 1.2 refer to "*hydraulically"* connected groundwater, instead of "*hydrologically"*, and I have recommended that this spelling is corrected in Appendix 2.

[12] In relation to how the amount was derived, refer 'Brown, P. (2011). *Waiau stock water and storage requirements*. Aqualinc Memorandum to A. Parrish, Environment Canterbury. 29 April 2011.

[13] Mr Singleton, Ms Shand, Fish and Game New Zealand, Dairy NZ Inc, Royal Forest and Bird Protection Society, and E Sage (Submitters 2, 91, 113, 134, 136 and 139).

defined as a water supply that has been developed to provide drinking water for people or to provide water for stock (of more than one individual) to drink. Therefore in my view these parts are not inconsistent with s14(3)(b).

114. In relation to fish passage, I note that the CWMS provides equal priority to the environment as to community supplies and stock water, and I also note that pursuant to section 7(h) of the RMA particular regard must be had to the protection of the habitat of trout and salmon (i.e. salmonid fish).

115. In my view, it is also important to consider this aspect of the Policy with its method of implementation, being Rule 1.3(d) and Rule 2.2(b) which requires that "*fish shall be prevented from entering the water intake as set out in Schedule WQN12A of the Natural Resources Regional Plan."* In my view, the Policy will not unduly compromise the security of community and stock water supplies, as it allows for these supplies, provided fish passage is not compromised, with this implemented through the design of the intake. This, in my view, is a design issue, and is still generally enabling.

7.3 Policy 1.5

116. Policy 1.5 seeks to enable community and/or stock drinking water supplies to continue to abstract water when the minimum flow in the Table 1 Regime is reached, provided that a WSAMS is in place. This is reflected in Rules 2.2(a) and Rule 7.3(a), which require a WSAMS in order for a take to be considered as a restricted discretionary activity. Te Rūnanga o Ngāi Tahu and others (Submitter 116) oppose the policy (and similarly the wording of the rule) on the basis that it is punitive to small community supplies due to the requirement for WSAMS, which they consider inappropriate for a smaller supply. They seek that the policy refers to a WSAMS being in place "where appropriate". It is my view that the proposed Policy wording provides greater certainty than that proposed by the submitter, as there is no certainty as to when a WSAMS is, or is not "appropriate". In my view, in order to mitigate the effects of these takes continuing below the minimum flow, it is appropriate for a WSAMS to be required, which in turn requires that reductions be made in times of low flow. This, in my view, provides an appropriate balance between the environmental, recreational, cultural, and water supply objectives of the Plan. In my opinion a management strategy is still an enabling instrument, as without one in place, it may make granting of a consent more difficult, due to the non-complying activity status triggered (Rule 4.2).

7.4 Policy 1.6

117. Policy 1.6 seeks to enable water to be taken and stored from any water body in the zone for fire fighting. While supported by several submitters, Mr Talbot (Submitter 1) identifies that taking and use of water for fire-fighting purposes is provided for under s14(3)(e) of the RMA, and seeks deletion of Policy 1.6 on this basis, as well as the reference to water for fighting fires in Rule 2.2.

118. It is my understanding that the purpose of this policy is to provide guidance on consent applications for a community and/or stock drinking water supplies that include water proposed for storage for fire fighting purposes. It is my view that there is a tension however, between Rule 2.2 and s14(3)(e) of the RMA, which in my view, already allows for takes and uses of water for fire fighting

purposes. I also note that fire fighting water is not included in the definition of community drinking water supplies.

119. It is therefore my opinion that the phrase "*including any water necessary for fighting fires"* should be removed from the main stem of Rule 2.2 (a restricted discretionary activity) because as currently worded it is contradictory to s14(3)(e) of the RMA. However, in my opinion, it may be helpful to insert the phrase in the matter for discretion (i), so that water for fire fighting can be considered within any application for a take for a community and/or stock drinking water supply. In terms of Policy 1.6, it is my view that to avoid contradiction, the policy should be deleted.

7.5 Rule 2.2

120. These policies and overarching objective are implemented through: Rule 1.2 (permitted activities for small-scale consents) which is discussed in the 'Permitted Activities' section of this report; Rule 2.2, which provides for the taking, using or diverting of surface water for a community and/or stock drinking water supply as a restricted discretionary activity; and Rule 7.3 which provides for this in relation to groundwater as a restricted discretionary activity.

121. Several submitters[14] seek that additional standards and terms are included in Rule 2.2, as follows, on the basis that these are included in Policy 1.4 and are needed to protect instream values:

    a. "*abstraction will not induce the river to go dry*"

    b. "*the frequency of flow events between 1.5 and 3 times the median flow will not be reduced*"

    c. "*native and salmonid fish passage will not be compromised"* (or *"native* fish *including eel passage will not be compromised*")

122. While these matters are identified in Policy 1.4, I do not agree that they need to be repeated within Rule 2.2 in order to implement it effectively. This is because, and as noted by Federated Farmers of New Zealand (Submitter 123), who opposes the changes sought above in their further submission, the rule is for a restricted discretionary activity, and therefore the matters for discretion provide the ability for these matters to be considered by the Council, when assessing a resource consent application. It is my view that the rules and policies, in combination, are to achieve the objectives of the Plan, and that the type of repetition sought by the submitters between the policy and rule is not efficient or necessary for achieving the Objective.

[14] Water Rights Trust Inc, Department of Conservation, Fish and Game New Zealand, Royal Forest and Bird Protection Society and E Sage (Submitters 48, 90, 113, 136 and 139).

8. Minimum Flows

8.1 Planning Framework Generally

123. The key objective within the HWRRP which relates to the proposed minimum flows is **Objective 2**, which states:

> *Management of water levels and flows in the Hurunui, Waiau and Jed rivers and their tributaries does not result in adverse impacts on:*
> *(a) the mauri of the waterbodies;*
>
> *(b) instream aquatic life;*
>
> *(c) upstream and downstream passage of native fish, salmon and trout;*
>
> *(d) the existing landscape and amenity values present;*
>
> *(e) breeding and feeding of riverbed nesting birds;*
>
> *(f) river mouth opening of the Hurunui River, and maintaining an open river mouth in the Waiau River, to provide for the migration of native fish and salmonid species and the collection of mahinga kai by tangata whenua;*
>
> *(g) the extent of periphyton and cyanobacterial growth and the impact on recreational activities; and,*
>
> *(h) recreationally important flows in the mainstem of the Hurunui and Waiau rivers for kayaking, jetboating, swimming and salmon and trout fishing.*

124. A number of policies in the Plan, in combination with the proposed rules, together with Table 1 within Part 4 (Environmental Flow and Allocation Regime), seek to achieve this objective. In my view, these generally fall into the following categories:

a. Policies requiring adherence to the Table 1 Regime (Policy 2.1), implemented through a general prohibited activity status (Rule 5.2) that excludes Community and/or Stock Drinking Water Supplies. This is addressed in **this section** of the report, except in relation to '**Community and Stock Drinking Water'** (already discussed);

b. Policies setting out requirements for tributaries not specified in the Table 1 Regime (Policy 2.2) and related rules (for example Rule 1.3). This is addressed in **this section** of the report;

c. Policies setting out requirements in relation to pro-rata reductions (Policies 2.3 and 2.4). This is addressed in **this section** of the report;

d. Policies requiring new takes, dams, or diversions to ensure flows for particular activities are not adversely affected (Policies 2.5, 2.6 and 2.7), generally implemented through assessment matters for rules (e.g. Rules 3.1 and 3.2). This is addressed in **this section**, except in relation to Policy 2.6 which is addressed in the '**mauri'** section of this report;

e. Policies altering minimum flows following the commissioning of 20,000,000m^3 of storage. This is addressed in the '**minimum flows and storage'** section of this report;

f. Policies addressing minimum flows in areas where further investigation is required (Policies 2.10 and 2.11). This is addressed in the '**Jed Catchment'** and '**Minimum Flows in Identified Drains'** sections of this report.

125. The following section of this report addresses the appropriateness of Objective 2 in achieving the purpose of the RMA and giving effect to the relevant provisions of the various statutory documents set out below, and then addresses the above topics not covered in separate sections.

8.2 Relevant Statutory Documents

126. It is my view that Objective B1 and Policy B1 of the NPSFM are directly relevant to the setting of minimum flows. It is my view that in order to give effect to the NPSFM, the HWRRP, as a regional plan, must set objectives and flow levels sufficient to safeguard fresh water in relation to its life-supporting capacity, ecosystem processes and indigenous species.

127. I also consider Objective 1, Policy 1 and Policy 2 of the RPS to be relevant to the setting of minimum flows. It is my view, that what is required in order to give effect to the RPS, is for flow levels to be set which ensure those matters listed in Objective 1 are respectively safeguarded / protected / preserved / maintained, or in relation to the natural character of lakes and rivers, outstanding natural features and landscapes, significant habitat of trout and salmon, and amenity values, that adverse effects are remedied or mitigated.

128. The provisions within the PRPS that I consider relevant to this matter are Obejctive 7.2.1 and Policy 7.3.4. In relation to these, it is my view that the PRPS directs that regional plans set flow levels to safe-guard the life-supporting capacity, mauri, ecosystem processes and indigenous species of the fresh water and protect natural character values, including protecting flow variability and providing for recreational and amenity values.

8.3 Objective 2 - Generally

129. Objective 2 of the HWRRP is supported by several submitters[15]. Other submitters generally support the objective, but seek changes to its wording that they consider will better achieve the purpose of the RMA. These are categorised as follows:

a. Amendments to the stem of the objective in relation to the reference "*does not result in adverse impacts on"*;

b. Amendments to the wording of matters; and

c. Additional matters to be added to the objective.

[15] Hurunui District Council, Ms Lesley Shand, Fish and Game New Zealand, Te Rūnanga o Ngāi Tahu and others, Ms Eugenie Sage (Submitters 88, 91, 113, 116 and 139).

8.4 Objective 2 – Stem

130. Meridian Energy Ltd (Submitter 80) seeks that Objective 2 refer to "*significant"* adverse impacts only, on the basis that the current wording is too absolute, and that they do not consider it possible to achieve "no adverse impacts", whilst also enabling the use of water in accordance with other provisions of the Plan. Irrigation NZ Inc (Submitter 104) similarly argues that it will not be possible to manage water levels and flows from abstractions so they do not result in any adverse impacts, and accordingly seeks that "*does not result in"* is replaced with "*minimise*". Ngāi Tahu Property Ltd (Submitter 121) seeks reference to "*significant adverse effects*" on the matters listed being avoided or mitigated, for similar reasons. Hurunui Water Project Ltd (Submitter 127) seeks that adverse impacts are taken into account, on the basis that the current wording is contrary to the intent of the RMA, which does not anticipate no adverse impacts, but rather that these effects are managed. For a similar reason, Amuri Irrigation Company Ltd (Submitter 83) seeks that the objective refers to "*unacceptable*" adverse impacts.

131. I generally agree with the submitters, and as such it is my view that the current wording of Objective 2 is not the most appropriate way to achieve the purpose of the RMA. In particular I have concerns that the current wording, requiring no adverse impacts, does not generally enable the use and development of the water resource, while managing, through avoidance, remediation or mitigation, the adverse effects arising from this. In my view however, simply 'taking into account' adverse impacts is not sufficient to meet the purpose of the RMA.

132. I do however, have some concerns with the use of the word "significant". Firstly, significance may be a difficult measure. For example, is a loss of just one stretch of the river currently used for kayaking 'significant', and does this depend on the regional importance of this particular stretch? For a threatened species, is a 5% reduction in the area for breeding and feeding significant, and is a higher percentage less significant for a more common species? For similar reasons, I also do not consider 'minimise' or 'unacceptable' to be the most appropriate way to address this issue.

133. Secondly, it is my view that 'significant' adverse effects sit at the other end of the scale from no adverse effects. Whether the effects of an activity are acceptable, such that it is appropriate, on balance to grant a consent, in my view is likely to sit somewhere between there being 'no adverse effects' and there being 'significant adverse effects' that have not been avoided, remedied or mitigated. It is my view that the objective should reflect this scale, rather than one end of it; therefore neither a no effects approach nor only significant adverse effects approach is appropriate, in my opinion. In this respect, I agree with the comments in the further submission of Fish and Game New Zealand (Submitter 113)[16], that effects that are less than significant are also relevant, and it is inappropriate to limit the protective measures within objectives and policies to significant effects only.

[16] Fish and Game New Zealand (Submitter 113) opposes the inclusion of "significant adverse effects" sought by Meridian Energy Ltd (Submitter 80) in relation to this objective and to other objectives and policies.

134. I acknowledge that to an extent determining the significance of an adverse effect, whether it is acceptable or not, or what sufficient minimisation is, is a value judgement that can be undertaken as part of the consideration of a consent application. However, my concern is that the Plan's policies and rules, in order to achieve the objective, will need to define this to an extent. For example, in order for Policy 2.7 to ensure that there are no significant adverse impacts on the identified flow ranges for recreational activities, it would need to identify what a significant impact would be, for example stating whether a 5%, 10% or 50% reduction in the frequency of these flows would be significant. In my view, what is more in accord with the RMA, is the avoidance, remediation and mitigation of the effects on the identified matters. The overall appropriateness of the avoidance, remediation and mitigation will then be considered on a case by case basis in consent applications, with the Plan identifying what matters need to be addressed. I therefore recommend that the stem of the Objective is worded as follows:

> *"~~Management of~~ ~~w~~Water levels and flows in the Hurunui, Waiau or Jed rivers and their tributaries are managed to avoid, remedy or mitigate ~~does not result in~~ adverse ~~impacts~~ effects on:"*

135. For completeness I note that, in my view, this wording give effects to the NPSFM, in that managing water levels and flows within the zone to avoid, remedy or mitigate adverse effects on the identified matters will safeguard the life-supporting capacity, ecosystem processes and indigenous species (including their associated ecosystems) of fresh water. I also consider the proposed wording gives effect to the RPS, because the approach seeks to safeguard, protect, preserve or maintain, respectively, those factors listed in Objective 1 of the Freshwater Chapter in the RPS, and the amended wording better enables people and communities to maximise the wellbeing obtained from the water resource (Policy 2). Further, in my view the wording is consistent with Policy 7.3.4 in the PRPS.

8.5 Objective 2 – Specific Matters

136. In relation to the matters included in Objective 2, I note that any submission points relating to part (a) are addressed in the **'Mauri' section** of this report.

137. Some submitters[17] seek that the same protection is given to the Hurunui River mouth as to the Waiau, through part (f) being amended to refer to maintaining an open river mouth in both the Hurunui and Waiau rivers, rather than its current reference to "*river mouth opening*" only for the Hurunui River. I note that, Mosley (2002, p. 36) stated that mouth closure, although infrequent, may occur at the Hurunui River mouth due to extreme low flows and vigorous wave action. If the objective were amended to refer to maintaining an open river mouth, there could be an expectation that actions would be required to maintain an open river mouth, even when naturally it could close, for example, through the release of flows from storage. I note that this differs in relation to the Waiau River, where Mosley (2004, p. 38) stated that the Waiau River Mouth, never, or at least very rarely closes. Therefore it is my view that the current wording of the Objective is more appropriately recognises the differences between the two river mouths.

[17] Mr Michael Singleton, Port Robinson Informed Citizens Inc, and Mr H Wiesen and Ms M Noering (Submitters 2, 51 and 135).

138. Meridian Energy Ltd (Submitter 80) seeks that part (d) and (h) are amended to provide support for these matters, rather than a requirement for (significant) adverse impacts on these to not result. This relates to recreation and amenity being second order priorities in the CWMS, with the other matters relating to first order priorities. I note that this is somewhat reflective of the wording in Policy 7.3.4 of the PRPS, which requires that water quantity management "*provides for*" recreational and amenity values, having satisfied the requirements of Policy 7.3.4(a) to (e). In my view, managing effects (through avoidance, remediation or mitigation), on recreational and amenity values is in effect, providing for those values. In my view, providing *"support"* for these values, is not more appropriate achieve the purpose of the RMA, because it is not worded strongly enough to maintain amenity values.

139. In relation to (d), Ngāi Tahu Property Ltd (Submitter 121) seeks that it also include natural character. While natural character is not defined in the RMA, it is my understanding that there are a number of elements generally considered to make up natural character[18]. In my view these are already addressed through in the objective and it is not necessary to further refer to them, as this would result in unnecessary duplication.

140. Ngāi Tahu Property Ltd (Submitter 121) seeks (e) be amended to refer to the breeding "success" of riverbed nesting birds and not to feeding, which in their view is covered by (b). In my view these changes are appropriate and provide greater clarity as to what the objective seeks to achieve.

141. Ngāi Tahu Property Ltd (Submitter 121) seeks that (h) be amended to refer to "*the existing recreational amenity provided by these rivers"*, as the listed activities do not take place in many parts of these rivers, which they consider is implied by the current wording. I agree with the submitter that the wording could be improved to better focus on the effect that flows have on recreational amenity. However, I consider it helpful for the objective to indicate what those recreational values relate to (i.e. those activities listed), but that it should be clear that this list is not exhaustive. I therefore recommend the following wording:

> *(h) ~~recreationally important flows in~~ the existing recreational amenity provided by the mainstem of the Hurunui and Waiau rivers for activities including kayaking, jetboating, swimming and salmon and trout fishing.*

142. Meridian Energy Ltd (Submitter 80) also seeks that part (g) be amended to not refer to "*the impact on recreational activities".* Similarly, Ngāi Tahu Property Ltd (Submitter 121) seeks its removal because it is redundant, and removal of the reference to cyanobacterial growth as it is unlikely to be

[18] For example, in the PRPS, natural character is described as including: "*…a range of qualities, and features created and sustained by nature, such as the quality and quantity of water, the character of the bed substrate, the natural processes which move sediment, water and biota, and the values and characteristics these processes give rise to. Natural character includes the aquatic ecosystems which the water body supports including the diversity and abundance of indigenous species, the presence of healthy and resilient riparian margins, and its surroundings, including landforms and vegetation. The natural character of a fresh water body often gives rise to associated values and uses, for example recreational and amenity values, and social and economic activities which are based on these values*. *Natural character can help provide a sense of place for people and communities, and when it is degraded this sense of place can be affected.* "

common in these rivers, and prefer the use of 'accumulation' to growth. My reading of part (g) is that the reference to recreational activities relates to the impact that periphyton and cyanobacterial growth can have on these activities, rather than this referring to the impacts on these activities generally. It is my opinion that this could be better worded to clarify this. In particular I consider that the current wording could be read to imply that periphyton and cyanobacterial growth are desirable, and that adverse impacts on these growth are to be avoided. Instead, in relation to cyanobacterial growth, what is sought by the objective is that any potential for it to arise is adequately avoided, remedied or mitigated. As such, if it does not arise, as suggested by Ngāi Tahu Property Ltd (Submitter 121), potential adverse effects from it will be avoided. It is therefore my recommendation that (g) be re-worded to:

> "*recreational activities, resulting from increased accumulation ~~of extent~~ of periphyton and cyanobacterial growth ~~and the impact on recreational activities~~"*

143. Federated Farmers of New Zealand (Submitter 123) seeks that parts (c) and (f) of the objective recognise the greater RMA status of indigenous species, on the basis that habitats of indigenous fauna are given greater priority under s6 of the RMA, than that of trout and salmon under s7 of the RMA. I acknowledge the distinction under the RMA for the protection of significant habitats of indigenous fauna to be "*recognised and provided for"*, while the protection of the habitat of trout and salmon is to be given "*particular regard*". However in my opinion, it does not necessarily follow that a distinction has to be made between the levels of protection provided, when a regional plan addresses these matters in a regional context. In other words, a regional council is entitled to have particular regard to protecting habitats of trout and salmon and determine, in the case of their value in the Hurunui and Waiau Rivers, to afford them the same level of protection as indigenous species. Therefore it is my view that there is no requirement under the RMA to make changes to these parts in the manner sought by the submitter, and they have not put forward any argument based on the merits of making any such changes.

8.6 Objective 2 – New Matters

144. Mr Michael Singleton (Submitter 2) seeks an additional part to refer to "*the maintenance of an open river bed for indigenous bird habitat"*, on the basis that there is no objective in the Plan supporting the habitat for indigenous birds. It is my view, however, that consideration of effects of water levels and flows on the breeding success of riverbed nesting birds (including indigenous birds) in part (e) of the objective already addresses this. I note that discussion on the appropriate water levels and flows for the breeding and feeding of riverbed nesting birds is discussed in the evidence of Dr Hughey, who notes a number of factors, including that of maintaining islands in a relatively vegetation-free state, that affect the breeding and feeding.

145. Department of Conservation (Submitter 90) seeks two additional parts relating to "*sedimentation patterns and volumes in the river channels"* and *"native fish spawning sites".* In relation to the former, it is my view that this is more appropriately addressed through Objective 3. As discussed in the evidence of Dr Snelder, it is the allocation of water that can have a significant influence on the variability of the residual flows in the river, which in turn can have a number of adverse effects, including on sedimentation patterns. In relation to

the latter, it is my view that this is already addressed through (b) and (c). I note that similar changes are also sought by the submitter to Issue 2 in Part 1 of the Plan, and for the same reasons as above, I do not recommend their inclusion within Issue 2.

146. Royal Forest and Bird Protection Society (Submitter 136) seeks that the objective also includes: "*natural processes and braided character of rivers*". As with the comments above, it is my view that it is the allocation of water, which in turn affects the variability of residual flows, rather than the minimum flow, that is likely to have adverse effects on the natural processes that create and maintain the river's braided nature. In my view, this is more adequately addressed in Objective 3, and I note that I have recommended an additional part to Objective 3 to better address this particular matter.

147. Amuri Irrigation Company (Submitter 83) seeks that Objective 2 include the following additional part: "*Existing, legally authorised, abstractions, diversions and uses of water and the reliability of these existing abstractions and uses".* This is on the basis that broader matters than biophysical and metaphysical matters can be adversely affected by water levels and flows, including existing abstractions. Similar to this, Phoebe Irrigation Ltd (Submitter 86) and Dairy NZ Inc (Submitter 134) also seek that an additional point is added to the objective to ensure security/reliability of supply for existing irrigators.

148. In relation to this matter, I note that what is sought is similar to the requirement in Objective 3, part (f), to protect the reliability of supply for existing abstractors. It is my view that if this matter is to be included in Objective 2 that it should be worded consistently with Objective 3, as: "*the reliability of supply for existing abstractors".* In relation to the merits of including this matter within Objective 2 as well as Objective 3, I have had regard to the difference between the two objectives and how they relate, in my view, to achieving the purpose of the RMA. Objective 2, relates to the management of water levels and flows, seeking that these are managed so that they don't result in adverse impacts on a range of factors that, in my view, are instream values. The policies that stem from this objective largely relate to setting minimum flow levels, which have been determined based on these levels achieving the matters within the Objective. In this regard, it is my view that Objective 2 does not so much relate to the use and development of the water resource, which is addressed in Objective 3, but to the protection of the resource, and safeguarding its life-supporting capacity. In other words, this particular objective seeks to protect the water resource for its intrinsic values; not for its economic values. It is on this basis that I consider that it is not appropriate to include reliability of supply within Objective 2.

149. Objective 3, on the other hand, in my view relates to the use and development of the water resource, and seeks to generally enable this, subject to again, safeguarding its life-supporting capacity, and addressing adverse effects on the environment resulting from this. The policies that stem from this objective largely relate to allocation block sizes. In my view, it is more appropriate that reliability of supply is addressed in this objective, which is focussed not only on the intrinsic and environmental values of the water resource, but also its economic value.

8.7 Policy 2.1 and the Table 1 Regime

150. Policy 2.1 requires that no resource consent to take, dam or use water should be granted if the proposal will breach the minimum flows set out in the Table 1 Regime, with the exception of community or stock drinking water supplies (discussed elsewhere in this report). The policy itself is generally supported by several submitters[19], although a number of these submitters seek changes to the minimum flows within Table 1. As submissions seeking amendments to the policy relate to matters considered in the **'Community and Stock Drinking Water' section** of this report, they are not discussed further here.

151. In general submissions seeking alternate minimum flow levels relate to the appropriateness of the minimum flow for maintaining environmental or recreational values, enabling further allocation, or reliability of supply for existing abstractors. The various different minimum flows sought by submitters are considered in the evidence of Dr Jeff Smith, in terms of the effects these have on the reliability of supply. The proposed minimum flows are also discussed in the technical reports of Dr Jellyman, Mr Duncan and Dr Hughey, from the point of view of the effects that they have on fish migration, adult salmon and jet boat passage, and riverbed nesting birds.

152. From a planning point of view, the Table 1 regime is given effect to through the rules in the Plan, which require that any take (except community or stock drinking water supplies), be it a permitted, restricted discretionary or discretionary one, comply with the minimum flows in the table. The taking of water not consistent with the table, including the minimum flows, is a prohibited activity under Rule 5.2, meaning that no consent can be applied for to take water with a lower minimum flow. These rules, together with the policies in the Plan, are to achieve the Plan's objectives, particularly Objective 2. In my view, the minimum flows are therefore intended to achieve the purpose of the RMA, in that they seek to enable water use to provide for people's well-being, provided that the potential of water to meet the needs of future generations is sustained; its life-supporting capacity is safeguarded; and adverse effects on amenity values that can arise through water use are avoided, remedied or mitigated.

153. It is my view that determining the most appropriate minimum flow to achieve the objectives of the Plan and ultimately the purpose of the RMA, requires a value judgement to be made, based on the technical information presented. For example, as demonstrated in the evidence of Dr Smith, higher minimum flows will affect reliability of supply, reducing the ability for the water resource to be used to provide for people's well-being. However this needs to be balanced against the evidence of others, such as Dr Hicks, Mr Duncan and Dr Hughey, as to the sufficiency of the minimum flow to adequately safeguard the life-supporting capacity of the water, and ensure that the adverse effects on amenity values that can arise through water use are appropriately avoided, remedied or mitigated.

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[19] Hurunui District Council, Department of Conservation, Ms Lesley Shand, Mr Ian Fox, Fish and Game New Zealand, Federated Farmers of New Zealand, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 88, 90, 91, 109, 113, 123, 136 and 139).

154. I also consider it important to bear in mind that any changes to the minimum flow to address a particular value, will have consequential effects on other values, and therefore on the ability to achieve all the objectives of the Plan. This is noted in the further submission of Amuri Irrigation Company Ltd (Submitter 83), who opposes increases sought by some submitters to the minimum flows, arguing that these submitters are too narrowly focussed on instream values only. In their view, the increases sought could have potentially significant effects on reliability of supply, which in turn would have adverse social and economic outcomes for the local and regional community and be inconsistent with Objective 3(f). Conversely, I note that adjusting the minimum flow to ensure reliability of supply, or reducing it to allow for further water to be taken and used, will have effects on instream values that may compromise other objectives in the Plan. I also note that the further submission of Ms Heidi Tirikatene-Nash (Submitter 132), who considers the minimum flows proposed are too low to ensure that the river "thrives" rather than just survives. In my view, the balance required under the RMA in this regard (and reflected in the Objectives of the Plan) is to provide for the use of the water resource, while retaining its life-supporting capacity, rather than simply providing for its life-supporting capacity alone.

155. In making a value judgement as to how to balance these considerations, it is my opinion that it is important not to lose sight of the process undertaken by the Zone Committee. This Committee, representing various interests, and having considered all the technical information available at that time, recommended the minimum flows proposed in the HWRRP, for the reasons outlined in the ZIP, and referred to by Mr Parrish. I reiterate that the approach of the ZC is based on collaboration and consensus, and reflects an agreed outcome that they consider, collectively, will deliver all the CWMS targets for this zone (ZIP, p. 4). For example while some submitters raise concerns in relation to reliability of supply, it is clear that the ZC considered this matter, alongside information relating to the flows required for in-stream values, in coming to their recommendations (for example, ZIP, pp. 25-26).

156. In relation to the Waiau River, the background to the minimum flow regime is provided in the evidence of Mr Parrish. I note that the A Block minimum flows proposed in the HWRRP, prior to the development of a specified amount of water storage, are consistent with the current regime. In terms of considering the balance between enabling water use and achieving ecological outcomes sought, i.e. the most appropriate way to meet the purpose of the RMA, I consider it particularly important to note the following. Some of the technical evidence indicates that the proposed minimum flows may compromise salmon passage and risk river mouth opening in the Hurunui River (refer to evidence of Dr Hicks and Dr Jellyman). However, the ZC was cogniscent that this evaluation is based on a worst-case scenario, where all takes are fully utilised, which currently they are not. I also note the comments of Dr Hicks that the likelihood of not achieving river mouth opening has been based on comparison with the natural flow regime, rather than the current flow regime, and could be further mitigated through managing flood bypass. As recorded in the ZIP (p. 22), the ZC was not presented with any evidence that in-river values have been compromised in the last decade under the existing minimum flow and current water use from the river. Because of this, and concerns about the effects that an increase of the minimum flows could have on the reliability of supply for existing abstractors the existing A Block minimum flows are proposed to be retained in the HWRRP, but only prior to

storage of a specified capacity being developed (which is addressed further in the **'Minimum Flows and Storage'** section of this report).

157. The background to the minimum flow regime for the Hurunui River is also provided in the evidence of Mr Parrish, who also discusses the rationale in the ZIP for the recommendations of the ZC. I note that the proposed minimum flows differ from the current regime, through providing a more simplified approach than the current a range of flow regimes applying to different users. I also note that the work and consultation undertaken as part of the Variation 8 process to the NRRP has been considered by the ZC, and as set out in the ZIP, has largely been adopted in the recommendations of the Committee. The reasons for any divergences between the proposed Variation 8 regime and that of the HWRRRP are set out in the ZIP and referred to by Mr Parrish. I also note that when storage of a specified capacity is developed, some changes to the minimum flow regime are proposed (discussed further in the **'Minimum Flows and Storage'** section of this report).

158. Ultimately, and as noted earlier, it is my view that the setting of minimum flow levels requires a value judgement to be made, taking into account matters relating to the life-supporting capacity of the rivers, recreational opportunities and reliability of supply for existing abstractors, as to what level will best achieve the overarching objectives of the HWRRP and provide for the well-being of people and the community. In my view, the collaborative approach undertaken by the ZC, and based on substantial technical evidence, reflects such a value judgement. While acknowledging that the Hearings Panel may come to a different view based on their consideration of the evidence, it is my view that the relevant matters have been considered by the ZC in reaching their recommendation, and that this is reflected in the HWRRP. On this basis, it is my view that submissions seeking alternate minimum flows should be rejected, as I do not consider that any of the submitters have provided sufficient evidence to demonstrate that the ZC's recommendations on minimum flows are not the most appropriate way to meet all the objectives of the HWRRP.

159. For completeness I note that Te Rūnanga o Ngāi Tahu and others (Submitter 116) seek that the minimum flows are set to be consistent with the draft NPS on setting Flow and Allocation Regimes. It is my view that it is not appropriate for the regime to be consistent with the draft NPS on setting flow and allocation regimes, given that it is draft, and sets a national default methodology, providing a precautionary position, prior to in depth modelling and assessment. As such in-depth modelling and assessment has occurred, the draft NPS, in my view, is not relevant. I also note the assessment undertaken on this regime provided in the evidence of Dr Smith shows that if it were applied, a number of the Plan's objectives may not be met.

8.8 Tributaries versus mainstems

160. The HWRRP specifies minimum flows for both the mainstem and those tributaries specified in Table 1, and proposes that takes from these tributaries cease when the minimum flow of the mainstem is reached; regardless of whether the flow in the tributary itself is above the minimum flow specified[20].

[20] This requirement is stipulated within Table 1 itself, as follows: "*All takes within the Waiau* [or Hurunui] *Catchment, except those takes for the reticulated supply of human drinking water*

Mr John Talbot and Independent Irrigators Group (Submitters 1 and 92) oppose this approach on the basis that the tributary minimum flows are guaranteed as contributions to the mainstem, and that flows above this in the tributary should still be available for use.

161. In relation to this, I note the evidence of Mr Parrish. He states that as part of the consultation on the flow and allocation regime for the Waiau River, concerns were raised about the potential for the river mouth to become constricted or close with a minimum flow of $15m^3/s$, and that if more takes were permitted from tributaries without a requirement to reduce or cease abstraction when the mainstem minimum flow is reached, there would be less water reaching the mouth. I also note his comments that the same logic was applied to the Hurunui catchment, and that this represents a precautionary approach to ensure that the mouth is not induced to close due to abstraction. I also note the evidence of Dr Hicks, that closure events may increase under the allocation regime proposed from that which occurs naturally, and that this likelihood reduces when the minimum flow is increased.

162. I also note the comments in Dr Smith's evidence that tributary flows contribute to some instream values in river mainstems, including flows required to maintain mouth openings. Dr Smith also assesses the effects of the proposed approach on the reliability of supply for existing tributary abstractors. In terms of the Waiau River tributaries, he concludes that there is a minimal effect on reliability of supply, due to the minimum flow requirements for the mainstem being such that restrictions are rare. In relation to the Hurunui River tributaries, the greatest effects on reliability of supply will be on the Pahau River, which on average would be expected to be restricted seven days per year. It is my view that the 'costs' associated with the proposed approach in terms of any potential effects on reliability of supply need to considered against the benefits of the approach, in terms of ensuring that the minimum flow regime for both the mainstem and also the tributaries, achieves part (f) of Objective 2, in that it seeks to address potential adverse effects on maintaining an open river mouth/river mouth opening of these rivers.

163. It is my view, based on the above, that to amend the requirement for takes from the tributaries to cease when the minimum flow of the mainstem is reached, would increase the risk that mouth closure might occur, and could therefore jeopardise achievement of this part of the objective.

164. I also consider that there are efficiency benefits from the proposed approach for tributary abstractors. This is because the mainstem is a telemetered site, but tributaries are not; therefore tying tributary abstractors to the mainstem flow allows for those abstractors to manage their restrictions in a more efficient way, because of the instantaneous monitoring.

8.9 Policy 2.2

165. Policy 2.2 relates to tributaries where a minimum flow has not been set in the Table 1 regime, and requires, under part (b), that if there is a "*robust*

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and stock water must comply with the minimum flow and allocation block limit in the table above and any specific minimum flow shown below. If no minimum flow is shown below then Policy 2.2 should be applied."

relationship" between the tributary and a listed minimum flow site, the take comply with that regime, or if there is no robust relationship, a "*residual flow*" is set for that tributary at 90% of MALF. Several submitters support this policy[21]. Mr John Talbot (Submitter 1) seeks that the policy be amended to state what must be taken into account in setting the minimum flow and allocation regime for tributaries not listed in Table 1, presumably querying how the "*robust relationship*" is to be determined.

166. I have been advised by Dr Smith that there are various determinants for what constitutes a 'robust relationship', for example criteria described in a report by Henderson et al. (2003) for assessing the reliability of empirical flow estimation techniques as well as the spatial and physical characteristics of each site. Given the variability in what may constitute a "robust relationship" for different tributaries and at different points of take, it is his view that it is more appropriate to allow this determination to be made on a case by case basis, as provided under the proposed policy guidance. Based on this, it is my view that the proposed approach in the policy is appropriate.

8.10 Policies 2.3 and 2.4

167. Policies 2.3 and 2.4 require that all takes and diversions on the mainstem and tributaries of the Hurunui or Waiau Rivers, reduce the amount of water taken on a pro-rata basis through reduction of the instantaneous rate of take; forming a water user group, or for the mainstems only and where the maximum rate of abstraction is less than 450l/s, by reducing the total volume taken over a 24 hour period. This is in order to ensure that the minimum flow in Table 1 is not breached. Several submitters support both policies[22].

168. The policy is not implemented through a rule in itself, such as being a requirement in a standard or term. However, consideration of reductions during times of low flow is a matter for discretion under Rules 2.2 and 2.3. Because partial restrictions are currently included as conditions of consent, it is my view that the policy is intended to provide direction for such conditions, and helping to ensure that these are consistent between consents.

169. Mr John Talbot (Submitter 1) raises concerns about the practical application of this policy to 'diversions'. In this regard, I note that consent applications for diversions would be considered against this policy, but on a case-by-case basis. It is my view that if consent conditions along the lines of this policy were not appropriate in a particular instance, this is a matter that would be weighed in the overall consideration of such a consent.

170. Mr Andrew Gardner, Mr Warren Higgins and Amuri Irrigation Company Ltd (Submitters 17, 45 and 83) oppose the approach proposed in the policies because of concerns that as current consents are reviewed and brought into line with these policies, there will be impacts on the reliability of supply for existing consent holders, particularly those with earlier consents, who are currently on preferential 'bands' with greater reliability

[21] Department of Conservation, Te Rūnanga o Ngāi Tahu and others, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 90, 116, 136 and 139).

[22] Hurunui District Council, Department of Conservation, Ms Lesley Shand, Te Rūnanga o Ngāi Tahu and others, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 88, 90, 91, 116, 136 and 139).

171. It is my understanding that the conditions on current water take permits from the Hurunui and Waiau Rivers are varied and inconsistent, resulting from the changing statutory environment during the period within which these permits have been granted or renewed. Where consents have identical conditions they have been grouped into 'bands', with each band having a different restriction regime. This has resulted in monitoring of permit conditions being complicated and time consuming for compliance monitoring staff, and in additional costs to consent holders. In addition, water user groups can only be set up where all users have the same restrictions. In order to better address this, the HWRRP proposes to remove the historical banding by amalgamating all consents into a limited number of allocation blocks, and to require, through these policies, consistent consent conditions in relation to partial restrictions.

172. The effects on reliability from the removal of the current banding system have been assessed by Aqualinc (2011), who concluded that the impact of the changes on pasture production for those water users on bands that would have reduced reliability under the proposed HWRRP regime would be relatively minor, and were estimated to result in less than 1% loss in annual production in a less reliable year. In the Hurunui River the assessment undertaken by Brown (2011a) concluded that irrigation reliability would still be 'good' under the proposed allocation regime.

173. I again note that the information regarding the effects on reliability has been considered by the ZC. It is my view that the Committee, in coming to their recommendation, have considered these effects (costs) alongside the benefits of reducing complexity by removing the historical banding and instead having a limited number of allocation blocks, with a consistent approach to partial restrictions.

174. Ravensdown Fertiliser Co-operative Ltd and Hurunui Water Project Ltd (Submitters 102 and 127) consider that the policies are impracticable because there is no time limit stated; they do not recognise that at some stage it will not be possible to reduce the amount taken further due to the need for water; and there is no recognition that when the Table 1 regime is met, there is no longer a need to reduce the amount taken.

175. It is not clear to me what sort of time limit would be applied to the policy to make it more efficient or effective. It is my view that the policy adequately addresses the 'need' for water, by seeking an equitable system for reducing takes between all users, while protecting the environmental, cultural and recreational bottom lines sought by the Plan. In my opinion it would not be appropriate for the policy to include reference that when the Table 1 regime is met, there is no longer a need to reduce the amount taken, because that is exactly what the policy applies to. The Plan requires that **no** water is taken (except for community and stock drinking water supplies) when the minimum flow is reached, with the pro-rata reduction relating to flows that are above this minimum, but less than the flow at the full allocation of any allocation block[23]. I also note the changes sought by Ravensdown Fertiliser Co-operative Ltd (Submitter 102) would mean the policy would only apply to reviews of existing takes, and therefore would not assist in providing guidance for new consents.

[23] For example, under the proposed regime in Table 1, the pro rata reduction would apply for A Block abstractors in the Waiau River in December when the flow was between 25m^3/s (the minimum flow) and 43m^3/s (the minimum flow plus the A Block allocation of 18 m^3/s).

176. Ngāi Tahu Property Ltd (Submitter 121) seeks that the policy is amended by changing part (c) to read "*by forming a water user group*". This is on the basis that there appears to be an error in part (c), in that it contains a clause that qualifies each of parts (a) – (c). I agree that amending part (c) will provide greater clarity, however I consider that the clause itself should not be removed, but amended, by inserting a paragraph return after "*group*", so that it is clearer that it applies to parts (a) – (c), consistent with Policy 2.4.

8.11 Policy 2.5

177. Policy 2.5 seeks, in my opinion, to achieve part (g) of Objective 2, and also part (c) of Objective 3, by seeking that any new take, dam or diversion of water does not adversely affect the effectiveness of flows between 1.5 and 3 times the median flow, for flushing periphyton, mobilising gravel and resetting algae and macro-invertebrate populations. Several submitters support this policy[24]. I note that under Policy 7.3.4(1)(c) of the PRPS, this matter is also addressed, with the policy seeking to: "*(c)* ***protect*** *the flows, freshes and flow variability* ***required to safe-guard*** *the life-supporting capacity, mauri, ecosystem processes and indigenous species including their associated ecosystems and protect the natural character values of fresh water bodies in the catchment, including any flows required to transport sediment, to open the river mouth, or to flush coastal lagoons"* (emphasis added). Objective 1 of the RPS is also relevant in terms of safeguarding the life-supporting capacity of the water (part (b)) and maintaining and enhancing amenity values (part (h))[25].

178. Meridian Energy Ltd (Submitter 80) raises concerns that the current wording of the policy is too absolute in nature, and that it is not possible to achieve no adverse effects on the effectiveness of flows, whilst enabling the take and use of further water. They seek amendments to the policy (and related explanations in the Plan) that they consider would be more achievable, and enable allocation whilst avoiding "significant" adverse effects. Amuri Irrigation Company Ltd (Submitter 83) seeks that the policy refer to "unacceptable" adverse effects on the basis that the RMA is not a no effects statute and they do not agree that all the effects sought to be managed by this policy need to be avoided, but rather the test for any proposal is whether the effects, on balance, are acceptable. Ngāi Tahu Property Ltd (Submitter 121) raise similar concerns around the practicality of being able to "protect" these flow events while also enabling further water allocation, and consider that it is the effectiveness of these fresh and flood events that need to be retained. Ms Lesley Shand (Submitter 91) seeks that the policy be amended to direct that the number of flood water flows must be "sufficient to" achieve the factors listed.

179. I agree with the submitters above, to the extent that I consider the policy should focus on maintaining the effectiveness of these types of flows, rather than seeking that the flows in themselves are maintained. In my view, the policy does already go some way towards this, as it focuses on the

[24] Meridian Energy Ltd, Department of Conservation, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 80, 90, 136 and 139).

[25] In relation to amenity values I refer to the evidence of Dr Snelder that "*Excess periphyton can also cause changes to water colour, odour and the general physical nature of the river bed, which has flow-on detrimental effects on aesthetics and human uses*."

effectiveness of these flows to achieve the listed matters. In line with the Policy 7.3.4(1) in the PRPS outlined above, in my view the most appropriate type of wording will be that which conveys a requirement to protect flow variability, to the degree that is required to safeguard important ecological processes. In relation to protecting flow variability, I have recommended a re-wording of the policy that I consider better achieves the objectives of the Plan[26]. For the reasons outlined earlier in relation to Objective 2, I have concerns with using the words "significant" or "unacceptable", but consider that the amended wording addresses the ultimate concerns of these submitters. I agree with Ms Lesley Shand (Submitter 91) that it is the sufficiency of flows to maintain the outlined ecological processes that are important, and have recommended wording in line with this.

180. In relation to the ecological processes referred to in the policy, I refer to Dr Snelder's evidence which states that: "*Mid-range flows drive important physical and ecological processes including: mobilising and transporting bed material and thereby maintaining channel morphology, reducing and removing fine sediment and periphyton and triggering flow dependent life-stage processes such as fish migration*."

181. It is my view that these three processes are generally reflected in Policy 2.5. In relation to the third (cueing of life-history stages for fish) I note the comments by Ngāi Tahu Property Ltd (Submitter 121) that it is somewhat unclear what is meant by the current wording of Policy 2.5 to "*reset algae and macro-invertebrate populations"*, and consider that referring to periphyton 'accumulations' as sought by the submitter is helpful. I also note that Ms Lesley Shand (Submitter 91) seeks that the policy be amended to refer to: clearing river beds of invading exotic vegetation that can adversely affect riverbed and wading native birds; removing periphyton accumulations and the build up of fine sediment; mobilising gravel rivers and providing amenity. I consider that these are matters generally covered in the current wording, and my preference is for wording consistent with that used in Dr Snelder's technical evidence. As such I also recommend reference to mobilising gravel to be amended to refer to mobilising and transporting bed material, generally consistent with the submitter's comments.

182. Ms Lesley Shand (Submitter 91) also seeks that the policy be amended to refer to both the mainstem of the Hurunui and Waiau Rivers, as well as their tributaries. I note that the wording of the policy is consistent with that of Objective 3(c) and therefore in my view the amendment is not required to achieve the objective.

183. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seek that the policy be redrafted to apply to all water permits, including renewals, not only to "new" takes. It is my view that this is appropriate, as in order to meet the objectives of the Plan, I consider this is something that needs to be considered in consent renewals.

184. For all of the fore-going reasons, I recommended that the policy is re-worded as follows:

[26] For completeness I note that I have recommended changes to Objective 3(c), and consider that the recommended changes to Policy 2.5 better achieve the objective as re-worded.

"*To ensure that any ~~new~~ take, dam or diversion of water allows ~~does not adversely affect~~ the effectiveness of for sufficient flows, between 1.5 and 3 times the median flow, to scour and flush periphyton accumulations, mobilise and transport bed material ~~gravel~~, and ~~reset algae and macro-invertebrate populations and~~ trigger flow dependent life-stage processes such as fish migration in the mainstem of the Hurunui and Waiau rivers.*"

185. Due to the changes recommended to Policy 2.5, I consider that consequential changes to the '*Environmental Flows'* section in part 1 of the HWRRP are required. The following amendments are recommended in relation to this, and in response to submissions made on these explanatory paragraphs by Meridian Energy Ltd, Te Rūnanga o Ngāi Tahu and others (Submitters 80, 116 and 121). Other submissions made on this explanatory paragraph, and any additional changes sought by the above submitters, are recommended to be rejected on the basis that the following wording is more appropriate:

"*In the mainstem of the Hurunui and Waiau River flows of around 1.5 to ~~2~~3 times the median flow are important for flushing accumulations of fine sediment and periphyton (aquatic plant growths and blooms) and to trigger flow dependent life-stage processes such as fish migration. Larger flows ~~while flows of around 3 times the median flow~~ are needed to turn over and mobilise ~~larger~~ gravel ~~boulders and reset algae and macro-invertibrate populations. Policy~~ Policies 2.5 and 3.5 seek that the effectiveness of these ecologically important and channel-forming flows be ~~protected~~ retained.*

8.12 Policy 2.7

186. Policy 2.7 seeks to ensure that any new take, dam or diversion of water provides for a range of flows, between 30 and 50 m^3/s and 35 and 75 m^3/s in the mainstems of the Hurunui and Waiau rivers respectively, to provide for recreational activities. This policy is intended to achieve part (h) of Objective 2. Department of Conservation, Royal Forest and Bird Society and Ms Eugenie Sage (Submitters 90, 136 and 139) support the policy.

187. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) consider that there is insufficient information to include the proposed flow ranges as being definitively important for recreation, and seek that the policy refer to flow variability generally. Whitewater Canoe Club Inc and Whitewater NZ Inc, and Mr Ian Fox (Submitters 95 and 109) consider that a wider flow range should be provided, on the basis that flows from ten to several hundred cumecs are valued for recreational use by kayakers, and that it is the variability of flows that are important to them. Hurunui Water Project Ltd (Submitter 127) is concerned that the application of the policy to the entire reach of the mainstem of the Hurunui River is too broad and is not necessary, seeking that the policy refer to those parts of the rivers that provide for regionally significant recreation activities.

188. I consider it helpful for a flow range to be specified in the policy, because it can provide guidance as to how the objective is to be achieved. However, I note the comments of submitters above that flow variability is of greater importance for kayakers, and that in different parts of the river, different flows

may be important for different recreational uses. I therefore recommend that the Policy is re-worded, in line with these submissions, as follows:

> *"To ensure that any new take, dam or diversion of water provides for flow variability above the minimum flow ~~a range of flows, between 30 and 50 m3/s~~ in the mainstem of the Hurunui ~~River~~ ~~and between 35 and 75 m3/s in the mainstem of the~~ and Waiau Rivers, to provide for existing recreational uses and values ~~activities~~."*

189. Due to the changes recommended to Policy 2.7, I consider that consequential changes to the '*Environmental Flows'* section in part 1 of the HWRRP are required. The following amendments are recommended in relation to this, and in response to submissions made on these explanatory paragraphs by various submitters.[27] Other submissions made on this explanatory paragraph, and any additional changes sought by the above submitters, are recommended to be rejected on the basis that the following wording is more appropriate :

> "*Flow~~s~~ variability above the minimum flows ~~of 35 to 75 cumecs~~ in the Waiau ~~River~~ and ~~30 to 50 cumecs in the~~ Hurunui Rivers ~~are~~ is important for the recreational uses of the river. ~~Salmon angling requires flows in the higher end of this flow band, while family jet boating is preferred throughout the specified flow band. Trout fly fishing, particularly in the braided sections of the rivers, is optimal in the lower region of these bands.~~ For instance, while salmon anglers prefer fishing in slightly turbid water, anglers fly fishing for trout prefer clearer water, particularly in headwater reaches of the Hurunui and Waiau catchments where fish can be "spotted". On the other hand, kayakers value the variability of flows. Policy 2.7 in this Plan seeks to ensure that any take or diversion protects ~~these~~ this flow ~~ranges~~ variability.*

190. Related to both Policies 2.5 and 2.7, Te Rūnanga o Ngāi Tahu and others (Submitter 116) raise concerns about the relationship of these two policies and the objectives that they seeks to achieve. They consider that if the flows set out within Policy 2.7 represent flows which are 1.5 to 3 times the median flows of these rivers then this policy should be retained, Policy 2.5 should be deleted, and/or Objective 2 be redrafted to include the following provision: "(*x) ensuring flow variability is maintained and that flows of between 1.5 and 3 times the median flow required to flush periphyton and mobilise gravel and reset the bed of the mainstem of the Hurunui and Waiau rivers are provided for within the environmental flow regime*". Should the flows set out within Policy 2.7 not represent flows which are 1.5 to 3 times the median flows of these rivers, they seek that the policy is redrafted to provide the rational as to why these flows are important.

191. As stated in Policy 2.7 and discussed above, the range of flows specified within this policy are to provide for recreational activities, and relate to Part (h) of Objective 2. Policy 2.5 provides for flows required to flush periphyton, mobilise gravel and trigger flow dependent life-stages, and therefore relate to Objective 2(g). The reference to recreational activities in Objective 2(g) relates to the effects that periphyton and cyanobacterial growth can have on

[27] Meridian Energy Ltd, Whitewater Canoe Club Inc and Whitewater NZ Inc, Mr Ian Fox and Ngāi Tahu Property Ltd (Submitters 80, 95, 109 and 121).

these activities and not in relation to the flows required for the activities themselves, which is addressed in Policy 2.7. Therefore in my view, no changes are required in response to this submission. I also note that the wording proposed by the submitter for Objective 2 is in any case covered by Objective 3(c), and in my view does not need to be repeated.

8.13 Part 1 Explanations

192. The 'Environmental *Flows*' sub-section in Part 1 of the Plan provides an explanation to the minimum flows proposed. Submissions on this sub-section that relate to changes sought on the Plan's provisions and which have been discussed above are not discussed further.

193. Department of Conservation and Ngāi Tahu Property Ltd (Submitters 90 and 121) seek changes to the second sentence of Paragraph 4. The following amendments are recommended in response to these submissions. Other submissions made on this explanatory paragraph, and any additional changes sought by the above submitters, are recommended to be rejected on the basis that the following wording is more appropriate:

> "... *A minimum flow of a river needs to supply sufficient flows to provide food and sustenance to riverbed nesting birds, passage for native fish, salmon, and trout ~~as well as other aquatic fauna~~ and provide enough water for recreational use of the river such as jet boating ~~jet boaters to traverse the mainstems of the Hurunui and Waiau Rivers~~*."

194. As noted by some submitters, the explanatory wording in this section is not entirely consistent with other provisions in the Plan (Independent Irrigators Group, Irrigation New Zealand Inc (Submitters 92 and 104)). For example, in relation to the Hurunui River, the flow regime proposed in the HWRRP within Table 1 differs from the status quo, and the discussion around minimum flows for non-consumptive takes is potentially confusing. Department of Conservation (Submitter 90) also seeks that within this section it is further specified what time frame constitutes '*short term*'. Amendments to clarify this timeframe are also sought by Meridian Energy Ltd (Submitter 80). The following amendments are recommended in response to these submissions. Other submissions made on these explanatory paragraphs, and any additional changes sought by the above submitters, are recommended to be rejected on the basis that the following wording is more appropriate (or because they relate to other changes sought by the submitters that are recommended to be rejected):

> "*In both the Hurunui and Waiau Rivers it is recognised that …. Therefore this Plan proposes to maintain the status quo flow regime for the mainstem of the ~~Hurunui and~~ Waiau ~~rivers~~ River and proposes a simplified flow regime for the Hurunui River taking into account these factors in the short term, until water storage is provided. The Plan also...*
>
> *This Plan therefore requires the minimum flow in the Hurunui River be increased to 15 cumecs for the months of February, March and April, and decreased to 12 cumecs in August, ~~and~~ or 10 cumecs in June, July and August for non-consumptive activity takes….*"

195. As noted by Ngāi Tahu Property Ltd (Submitter 121), the paragraph following the above paragraph within this section is an exact repetition of the section paragraph under '*Environmental Flows'*, and seek its deletion. I agree that this is appropriate.

9. Minimum Flow and Storage

9.1 Policies 2.8 and 2.9

196. Policy 2.8 directs the minimum flows required for the Hurunui River, and Policy 2.9 for the Waiau River, following the commissioning of any water storage facility for more than 20,000,000m^3 of water within the catchment, to ensure that the factors listed in Objective 2 are protected while also creating an incentive for storage. These flows are reflected in the Environmental Flow and Allocation Regime in Table 1, and differ from those proposed prior to a water storage facility being developed. The rationale for this is provided on pages 6-7 of the HWRRP, as follows:

> "*In both the Hurunui and Waiau Rivers it is recognised that while the rivers are currently in good ecological health, modelling shows that if all current abstractors used their entire consented rate of take, then the life supporting capacity and mauri of both rivers could be adversely affected. However, increasing the minimum flows immediately would have negative effects on existing abstractors' reliability of supply. Therefore this Plan proposes to maintain the status quo flow regime for the mainstem of the Hurunui and Waiau rivers in the short term. The Plan also recognises that the B Allocation Block is not sufficiently reliable for run of river irrigation and that storage is needed. Storage provides an opportunity for the minimum flow to be increased to improve ecological health and mauri of the rivers, as stored water is able to be utilised to augment existing abstractors supply when the river falls to low levels, improving reliability.*
>
> *This Plan therefore requires the minimum flow in the Hurunui River be increased to 15 cumecs for the months of February, March and April, and decreased to 12 cumecs in August, and 10 cumecs in June, July and August for non-consumptive takes, following the commissioning of any water storage facility which takes and stores more than 20,000,000m^3 of water. For the Waiau River the minimum flow must be increased to 20 cumecs in the months of February and March following the commissioning of any water storage facility which takes and stores more than 20,000,000m^3 of water. And, to provide an incentive for storage (potentially alongside hydro electric power generation on Waiau River) reduced to 20 cumecs in the months of May to December, as modelling indicates that the life supporting*

capacity of the River will continue to be protected at this flow during these months".[28]

197. In simplified terms, my understanding of the policy position is that:

a. The current minimum flows in summer months are considered too low to maintain good ecological health if all current abstractors were to take at their entire consented rate, or if more water were to be taken from the rivers;

b. Increasing minimum flows to avoid this risk would however have adverse effects on the reliability of supply for existing abstractors;

c. The ability to meet the development goals of the Plan and the ZIP is reliant on more water being able to be taken and utilised, which in turn requires storage;

d. The balanced approach proposed to address these issues is to require that the minimum flow is increased after a specified amount of storage is provided, with such storage addressing the reliability of supply for existing abstractors, and allowing for more water to be taken and used to meet the development outcomes sought.

198. Submissions on these policies, generally fall into the following topics:

a. Submitters who support the policy position (not discussed further);

b. Submitters who seek an alternative trigger point to 20,000,000m^3;

c. Submitters who seek that the altered minimum flows be applied immediately to new consents or non-consumptive takes, or progressively over a specified period of time regardless of storage;

d. Submitters who seek that the minimum flows are not altered post-storage.

9.2 Trigger Point

199. Department of Conservation and Fish and Game New Zealand (Submitters 90 and 113) consider that the trigger point of 20,000,000m^3 may be set too high to achieve Objective 2, on the basis that a storage scheme of less than this has the potential to use the full B Block Allocation and therefore increase the time when the rivers are at the current minimum flow. In their view this is only acceptable in the short term while there is no more abstraction. For this reason, they seek that the trigger point is reduced to 10,000,0000m^3. Royal Forest and Bird Protection Society (Submitter 136) raises similar concerns and further argues that the policy and amended flows create a perverse incentive to keep storage just under the trigger level, with the policy allowing for a significant amount of additional abstraction without raising the minimum flow, and then in only a limited way. Amuri Irrigation Company Ltd (Submitter

[28] I note that within Appendix 2 I have recommended wording changes to this explanation in response to specific submission points, that I consider provide greater clarity, but as these are considered to be minor they are not discussed in detail here.

83) opposes this in their further submission, on the basis that the loss of reliability that will result from increasing the minimum flow (which is triggered by the specified storage being developed) will not, in their view, be mitigated by a smaller water storage scheme. Ngāi Tahu Property Ltd (Submitter 121) considers that the Plan should promote a larger storage facility in the Hurunui catchment, and therefore the trigger point should be doubled to 40,000,000m^3 so as not to discourage the staging of storage and irrigation.

200. It is my view that the proposed approach to this matter and represented in the policies, is appropriate, because it takes a balancing viewpoint towards ensuring reliability of supply, providing for more water for development (through storage) and thus continued economic and social wellbeing, and safe-guarding in-stream environmental values. In my view, what the submitters are questioning, is the appropriateness of the trigger point to achieve this balance. A lower threshold would address the environmental matters sooner, because it would require that minimum flows were increased with a smaller amount of storage. However, submitters have identified a concern that a smaller storage supply might not be able to address reliability of supply for existing users that would be required as a result of the increased minimum flows. Conversely, a higher threshold could be more effective in addressing reliability issues, but could result in adverse environmental effects of a lower minimum flow, together with increased abstractions, being prolonged. In my view, determination of the trigger point ultimately requires a value judgement to be made, based on these factors. I have therefore not recommended that this figure be changed, while acknowledging that a different figure may, on balance, be more appropriate.

201. Related to this, Ngāi Tahu Property Ltd (Submitter 121) also seeks clarity as to what is meant by "any water storage facility", seeking that this should not preclude multiple facilities. It is my view that this is appropriate, as the outcomes sought by the Plan in relation to this matter are dependent on the overall storage provided, not how it is provided. In effect, the changes sought would ensure that once the trigger point is reached, whether through a single storage facility or multiple facilities, the new minimum flow regime would apply. Without this clarification, it is my view that it is not clear whether several smaller storage facilities of up to 20,000,000m^3 could be established without triggering the Plan's new flow regime. I do note that this could mean that one party could develop storage up to 20,000,000m^3 without triggering the new flow regime (and therefore having to address reliability of supply), with the next party to establish storage having to address this, but in my view the potential costs of this are outweighed by the benefits of increasing the minimum flow. I therefore recommend that Policies 2.8 and 2.9 are amended to:

> *Policy 2.8*
>
> *To ensure that the minimum flow at Mandamus and State Highway 1 in the Hurunui River is increased to 15 m^3/s during February, March and April, and decreased to 12 cumecs in August and for non consumptive takes the minimum flow is decreased to 10 m^3/s in June, July and August following the commissioning of any water storage facility or facilities which cumulatively exceed ~~takes and stores more than~~ 20,000,000m^3 of water (whether water is stored in-stream or out of stream) within the Hurunui River Catchment to ensure that the factors in Objective 2 are protected while at the same time creating an incentive for storage.*

Policy 2.9

To ensure that the minimum flow at Marble Point in the Waiau River is increased to 20 m^3/s during February and March and reduce the minimum flows to 20 m^3/s from May to December inclusive following commissioning of any water storage facility or facilities which cumulatively exceed ~~takes and stores more than~~ 20,000,000m^3 of water (whether water is stored in-stream or out of stream) within the Waiau River Catchment, to ensure that the factors in Objective 2 are protected while at the same time creating an incentive for storage.

9.3 Proportional Increase

202. Royal Forest and Bird Protection Society (Submitter 136) also raises concerns that if storage is not built as anticipated, the existing minimum flows will remain. On this basis they seek that the minimum flow increases proportionally to the water stored, and where no storage is constructed, that the minimum flow be incrementally increased annually over ten years. (I note that the submitter also seeks different minimum flows, which are discussed elsewhere in this report). It is my view that this approach, while addressing the potential environmental concerns, would not address the issue of reliability of supply, and as such, would not achieve the multiple aims of the HWRRP. I also note that the potential adverse effects of the existing minimum flows relate to the full consented rate being taken (which it isn't currently) and/or further water being taken. In relation to the latter, the B Block is stated as not being sufficiently reliable for run-of-river irrigation without storage (HWRRP, p. 7). Therefore if storage is not developed, as suggested by the submitter, the potential for these adverse effects to occur is minimised, and therefore in my view there is insufficient justification at this time to increase the minimum flow.

9.4 Immediate Increase

203. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) consider that there is insufficient demonstration between the requirements of the Plan in relation to water storage and the effectiveness of minimum flows to achieve Objective 2. Further, they argue that non-consumptive uses of water (such as hydro-electricity generation) should not be linked to the provision of water storage, before the amended minimum flows are applied. They consider that water storage does not provide the opportunity for minimum flows to be increased per se, but that storage provides for reliability of existing abstractors to be maintained, even when the minimum flow is increased. In this regard, they seek amendments to the Plan, including to Policies 2.8 and 2.9, so that ongoing reliability of supply for irrigation, prior to storage being provided, is implemented through the existing minimum flows being retained, but that the amended minimum flows be applied to new abstractors immediately, with new users who do not require storage, being enabled immediately.

204. I agree that storage provides for reliability of existing abstractors to be maintained, even when the minimum flow is increased, but note that the

increase in the minimum flows itself relates to addressing effects of all consented takes being utilised, and those associated with more water being taken from the river[29]. It is my view that the Plan provides for an integrated management approach to the issues that I have outlined. Providing for the use of more water, even for non-consumptive uses, does not address the impact of minimum flows from existing takes, and does not provide a storage solution to enable more development. It is therefore my view that it does not represent a more appropriate way to address all of the identified issues in an integrated manner.

9.5 No Increase

205. Independent Irrigators Group (Submitter 92) considers that it is not clear why minimum flows in summer months should be increased when the requisite storage has been provided, nor is it clear how such storage would benefit or compensate existing consent-holders who currently have lower minimum flows. The submitter seeks amendments to Policy 2.8 and Table 1 to remove the proposed increase to minimum flows in these summer months. Similarly, Amuri Irrigation Company Ltd and Phoebe Irrigation Ltd (Submitters 83 and 86) seek that the current regime for the Waiau River remains in place even after storage is commissioned, on the basis that the Plan presents no compelling reason why the minimum flows should be increased to address environmental concerns. Ballindalloch Farm Ltd (Submitter 140) is also opposed to the increase in minimum flow on the Waiau River following the development of storage as this will affect reliability and in their view there is insufficient evidence that the lower minimum flows result in adverse effects on the river. Conversely, Te Rūnanga o Ngāi Tahu and others (Submitter 116), while supporting the intention of Policies 2.8 and 2.9 to streamline and minimise the number of flow regimes that existing consents are subject to, are concerned that the flow regimes may not be sufficient to ensure the values in Objective 2 are protected.

206. It is my understanding that the ZC came to their recommendations in the ZIP, which are reflected in the HWRRP, based on technical evidence presented to them, which indicated risks to instream values from the existing minimum flow regime if all allocated water were to be used, and further risks associated with allocating more water, and prior to that, as a result of work undertaken by the Waiau Community Advisory Group in relation to the Waiau River, and work undertaken in relation to Variation 8 for the Hurunui River. This is consistent with the evidence of Dr Jellyman and Mr Duncan, which indicates that the proposed minimum flows may compromise salmon passage, if all allocated water is fully utilised. I also note that increasing the minimum flows, following storage, is intended to ensure that the values in Objective 2 are better protected. For example, the evidence of Dr Hicks shows that mouth closure events are less likely to occur with a higher minimum flow. Based on this it is my view that the policies are appropriate to achieve the outcomes sought in Objective 2.

207. In order to address potential effects of the increased minimum flow on existing abstractors, I note that the proposed rules and policies pertaining to

[29] Refer ZIP, p. 22.

water storage greater than 20,000m^3 and taking, diverting, discharging and use of surface water from all Allocation Blocks requires consideration of the effects of these activities on existing abstractors. As such, it is my view that the consent process provides the avenue for consideration of the benefits or compensation to existing consent-holders with lower minimum flows who would be affected by the increase.

9.6 Other Submission Points

208. I also note that several submitters make comments or seek amendments in relation to these policies as to where the costs should lie for addressing loss in reliability. In my view, these should be rejected on the basis that this is a private matter that sits outside the HWRRP.

209. Related to this Amuri Irrigation Company Ltd (Submitter 83) seeks that the Plan be amended to incorporate guidance relating to the future development of water storage infrastructure (which takes and stores more than 20,000,000m^3 of water). Further they seek that this guidance is the subject of more detailed consultation with key stakeholders, and addresses matters such as location of the infrastructure, its relationship with existing irrigation schemes, timing, costs and more detailed guidance as to who should contribute to the development of water storage. It is my view that it is not the role of the HWRRP, a regional plan produced under the RMA, to provide this level of detail or direction, particularly in relation to timing and costs. Rather, the HWRRP should set up a planning framework within which future proposals are to be assessed. The consenting process will then allow for matters, including effects on other authorised takes, and the effects of the location of any storage, to be considered in more depth, and in my view this is more appropriate than the changes sought by the submitter.

10. Minimum Flows in Identified Drains

10.1 Policy 2.10

210. Policy 2.10 is:

> "*To investigate whether a minimum flow is not required in Lowry Peaks Drain, Hermitage Drain, Mount Palm Drain or St Leonards Drain if a wetland is developed which manages nutrients from entering the mainstem of the Hurunui and Waiau rivers.*

211. In essence the policy signals both the intention to investigate the feasibility of a wetland in the identified area, and that as a result of this, it may be appropriate to remove the minimum flow requirements. The proposed minimum flows for these tributaries are contained in Table 1.

212. The explanation for the approach taken in the policy is contained in the "*Environmental Flows"* sub-section in Part 1 of the Plan. In summary, these drains have high nutrient concentrations, which affect water quality within the catchment (refer evidence of Dr Tanner). However, reliability of supply for the drains' water users has reduced as irrigation efficiency has increased (and will continue to do so), because artificial recharge resulting from irrigation run-

off has lessened (discussed in the evidence of Dr Smith). Because wetlands are able to reduce nutrient concentrations and improve water quality, the policy provides an incentive to do so, by signalling that with wetland development which benefits the wider catchment, a reduction in the minimum flow requirement may be appropriate. However such a change in terms of a lower minimum flow requirement, would still need to be introduced by way of a future Plan Change process.

213. Ms Shand and Federated Farmers of New Zealand (Submitters 91 and 123) support the Policy. Amuri Dairying Ltd (Submitter 129) supports the policy in part but considers that unnamed drains and Ministry of Works drainage systems should also be included, and that wetland development should be expanded to include other nutrient mitigation options. This is on the basis that low value modified tributaries should be assessed by nutrient loadings, not solely by nutrient concentration levels. The latter concern is a matter relevant to not only the identified tributaries, and is discussed further in the **'Water Quality'** section of this report.

214. Dairy NZ Inc (Submitter 134) supports the general intent of the policy, on the basis that there should be allowance for reduced minimum flows in low value and modified water bodies where wetland or other development helps to reduce high nutrient levels, and acknowledge this would require amendments to the Plan to reduce minimum flows or increase allocation block sizes. However they seek that the Policy is amended so that the flow reduction or increase in allocation block size can occur (subject to wetland or other offsetting mitigation) without the need for a plan change. Similar to this, the Hurunui Waiau Zone Committee (Submitter 81) raises concerns that because of the emphasis on investigation, the policy does not support applications lodged (presumably for water takes) where wetland development would be used to offset water quality effects. They also raise concerns that there is no link between the Policy and Rule 2.3, which provides for taking, diverting and discharge of water from within the A and B Allocation blocks as a restricted discretionary activity, subject to compliance with the specified standards and terms, including compliance with the current minimum flows in Table 1. They therefore seek changes to Policy 2.10 and Rule 2.3(c) in line with this.

215. Amuri Irrigation Company Ltd (Submitter 83) notes the problems outlined above in relation to reliability of supply decreasing as irrigation application efficiency increases, in relation to Lowry Peaks Drain (part of Amuri A Block in Table 1), whereby as artificial recharge reduces, it will become more difficult for existing abstractors to comply with the minimum flows. They also have concerns about the costs associated with investigating and developing a wetland, and seek deletion of the policy and the minimum flow for Lowry Peaks Drain until further information is known to address these matters.

216. Longbrook Dairy Ltd and T Macfarlane (Submitter 85) seek a range of amendments to the provisions of the Plan relating to Lowry Peaks Drain, including that a minimum flow and A Allocation Block, separate to that of the Amuri A Block is provided in Table 1, with a reduced minimum flow requirement, and setting or B and C Allocation Blocks. They further seek in regards to Policy 2.10 that it is amended, and rules are set, to reflect the outcomes of an actual investigation. Further, they seek that Table 1 is amended upon development of wetlands. I note that the current Plan provisions effectively allow for this, in that the policy signals an intention to amend Table 1, once investigations have been undertaken. However the

issue identified by other submitters is that such a process (and changes to the policy framework and rules) will require a Plan Change process.

217. Department of Conservation (Submitter 90) seeks deletion of the policy on the basis that it suggests that there may be no minimum flow requirements if a wetland is developed, without identifying the values of those water bodies and what effects little or no flow would have on them.

218. Related to the implementation of this policy, Mr Hugh Robinson (Submitter 3) considers that the flow regimes in Hermitage Drain, Lowry Drain and Mt Palm Drain do not need to be amended to maintain the instream values, noting that the current flow regime has created these values (presumably due to the artificial recharge that has resulted). In relation to Hermitage Drain, Mr Thomas MacFarlane (Submitter 4) considers that the increasing of the minimum flow is unnecessary, on the basis of establishment and preservation of wetland areas, and because the submitter considers that the less water flowing into the mainstem the better.

219. I have similar concerns to some of the submitters in terms of the effectiveness of implementing the policy, given that any investigation undertaken will occur outside the HWRRP processes. While, in my view, it may be appropriate to rely on non-statutory methods to implement the Plan's policies, I note that if after such investigation, wetlands are developed or proposed, there is no method of implementation through the rules in terms of this allowing for a reduction in minimum flow, as this would still have to occur through a Plan Change. In my view this is not particularly efficient or effective. It is therefore my view that either:

    a. The policy should be removed, and the existing minimum flows retained (subject to consideration of other submission points around the appropriateness of these levels), until such time as the investigation is undertaken, whereby the appropriateness of a reduction in the minimum flow can occur through a Plan Change process; or

    b. The policy should be retained, but amended to provide for applications to be considered for lower minimum flows where combined with wetland development, with some manner of implementation provided in the rules.

220. It is my view that the latter is a more appropriate way to achieve the Plan's objectives (particularly Objectives 2, 3 and 5), because it seeks to enable further water use, while also ensuring that the environmental outcomes sought by the Plan are met through incentivising the reduction of nutrients, and thereby enhancing the water quality of these drains and of the main stem. It is my view that such an approach appropriately considers the values of these water bodies, in that it is only through enhancing their water quality that a lower minimum flow can be considered. However, in line with the comments of Department of Conservation (Submitter 90), it is my view that before the removal of the minimum flow requirement in its entirety, due consideration needs to be given to the effects of this.

221. I note that in order to implement the amendments to the policy sought by Hurunui Waiau Zone Committee (Submitter 81) they seek following changes to Rule 2.3(c). :

"(c) the take complies with the minimum flow for the relevant allocation block for the surface water body as set out in the Environmental Flow and Allocation Regime in Table 1, except in circumstances where the take is from Amuri A or St Leonards Drain and a wetland or other nutrient management system is developed so that the annual average nitrate nitrogen concentrations do not exceed the chronic nitrate toxicity threshold for 95% level of protection (1.7 mg N/L) and do not exceed the chronic 90% level of protection threshold (2.4 mg N/L) at any time;

222. I have some concerns about the rule being worded in this manner. Firstly, I note that the changes sought by the submitter are consistent with the new Policies 5.1 – 5.2 that they seek, which I have recommended be included in the HWRRP (numbered Policies 5.3 – 5.4). It is my view that it is also at the policy level (i.e. within Policy 2.10 itself) that the reference to nitrate nitrogen concentrations should also be made, consistent with these other policies. Secondly, I note that non-compliance with this rule defaults to a prohibited activity status, and therefore in my view it needs to be quite clear whether the exemption is met. In my opinion the current wording is not sufficiently clear to achieve this. For example, if a wetland is proposed on a smaller tributary (for example Homestead Creek), it may achieve the levels for that tributary, but not in itself ensure this level is achieved at the confluence with the mainstem (for example, the confluence with St Leonard's Drain), which is influenced by other inflows.

223. It is my view that the wording of the rule does not indicate if this example would 'meet' the exemption, or if the exemption would only be met once the limits are achieved at the confluence with the mainstem. It is therefore my view that it is more appropriate that this sought of discretion and consideration is provided at the policy level. This would provide for applications involving smaller wetlands and nutrient management systems to be considered as to whether they contribute towards meeting the policy as a whole, which in my view is appropriate, and encourages incremental improvements.

224. It is therefore my recommendation that Policy 2.10 and Rule 2.3(c) are amended as follows:

Policy 2.10

To ~~investigate whether~~ provide for a reduction in the minimum flow ~~is not~~ required in Lowry Peaks Drain, Hermitage Drain, Mount Palm Drain or St Leonards Drain if a wetland or other nutrient management system is developed which manages nutrients from entering the mainstem of the Hurunui and Waiau rivers, and assists in achieving annual average nitrate nitrogen concentrations that do not exceed the chronic nitrate toxicity threshold for 95% level of protection (1.7 mg N/L) and the chronic 90% level of protection threshold (2.4 mg N/L) at any time.

Rule 2.3

(c) the take complies with the minimum flow for the relevant allocation block for the surface water body as set out in the Environmental Flow and Allocation Regime in Table 1, except in

circumstances where the take is from Amuri A or St Leonards Drain and a wetland or other nutrient management system is developed in accordance with Policy 2.10;

225. If the above recommendations are accepted, it is my view that consequential amendments to Rule 5.2 are also required to provide clarity, as follows:

> "*The taking of water from the Hurunui or Waiau catchments that is not consistent with the Environmental Flow and Allocation Regime in Table 1, unless the take is for Community and/or Stock Drinking Water Supply, or is provided for under Rule 2.3(c), is a prohibited activity*."

226. In relation to the concerns of Amuri Irrigation Company Ltd (Submitter 83) as to the costs of such investigation and development, I refer to the evidence of Dr Tanner, who in effect has undertaken such an investigation. It is my view that similar investigations could be undertaken by the ZC, but that this would sit outside the HWRRP. Additionally, it is my view that such an investigation could be undertaken by an applicant, who is seeking to take and use further water from one of these drains, with the investigation forming part of the consent application. As such the costs of the investigation will either fall to the Council (and therefore the wider community), with the benefits of such costs being justified through the improvement to water quality in the mainstem, or to an applicant who receives benefit from the ability to take and use additional water. It is my view that this is appropriate, and it is usual for such investigations to be undertaken in either way. It is further my view that the costs of such wetland development are ultimately a matter that sits outside the scope of the Plan; essentially the HWRRP provides an incentive for such development to occur.

227. It is also my view that it is appropriate for the policy and rule framework to also consider other nutrient management options than wetlands alone. This is on the basis that the outcome sought is not the development of wetlands, but the improvement in water quality that their development can provide, and some other form of nutrient management may be equally appropriate to achieve the outcome. It is my view however that the policy and rule framework needs to be sufficiently robust to ensure that the outcome is achieved, regardless of the form of nutrient management employed.

228. With respect to the inclusion of other drains or water bodies, it is my view that this would only be appropriate if there are other drains to which the same situation applies, being those which have high nutrient concentrations, and for which a lower minimum flow is a way of addressing (in combination with water quality improvements) an expected lessening of the reliability of supply.

229. With particular regard to Lowry Peaks Drain, it is my view that removing the minimum flow as sought by Amuri Irrigation Company Ltd (Submitter 83) is not appropriate, as I do not consider that this would achieve Objectives 2 and 3, because it would allow for further abstraction, without any improvement in water quality. In particular, I note that the lessening of reliability that existing users may experience, is less affected by the proposed minimum flow than by the expectation that as irrigation runoff and bywash decrease as a result of water application efficiency improvements, reliability of supply will decrease. It is my view that while having no minimum flow may address the reduced reliability of supply, it is not the most appropriate way to do so, as it does not adequately address the environmental effects of allowing more water to be taken. As stated by Dr Smith, while efficiency improvements are expected that would reduce reliability of supply for existing abstractors, the effects of

these will happen over time not instantly, allowing for time to adapt to these effects.

230. Similarly, in relation to the matters sought by Longbrook Dairy Ltd and T Macfarlane (Submitter 85), it is my view that the submitter has not demonstrated how a reduction in the proposed minimum flow, an increase in the A Block Allocation, and further B and C Block allocations from Lowry Peaks Drain, will more appropriately meet the objectives of the Plan, in terms of how additional water allocation will achieve the environmental outcomes sought. Again I note the evidence of Dr Smith, that the reliability of supply for existing users in drains such as Lowry Peaks where flows are increased from irrigation runoff and bywash, is likely to reduce as a result of increased irrigation efficiency. It is my view that it is not appropriate to address the potential effects from this by simply reducing the minimum flow, without other measures being undertaken to address the environmental effects of a reduced minimum flow.

231. Similarly, suggesting the flow regime should not change (as sought by Mr Hugh Robinson, Submitter 3), without consideration of how the expected decrease in irrigation runoff and bywash will result in any instream values created by this also being reduced, in my view does not adequately address how this will achieve the Plan's objectives. I have been advised by Mr Andrew Parrish that minimum flows in the streams referred to by the submitter have been set over time and are very difficult to monitor or for consent holders to check compliance with their conditions. The minimum flows proposed in the HWRRP (including compliance with the Amuri A, where the flow recorder is located) were assessed by technical specialists, with expertise on a range of values, and in my view will better ensure the policies and objectives of the Plan are achieved, as well enabling monitoring to be undertaken and consent compliance to be ascertained.

232. The exception to this is Hermitage Drain. It is my understanding that the current residual minimum flow in Hermitage Drain is 20l/s, with the HWRRP proposing that this is increased to 30l/s. I have been advised by Mr Parrish that the proposed increase was unintentionally added to the Plan, and I am not aware of any evidence suggesting that the current residual flow needs to be increased. I therefore recommended that Table 1 is amended to refer to a residual flow of 20l/s.

11. Water Allocation

11.1 Objective 3

233. Proposed Objective 3 in the HWRRP provides for an overarching goal in relation to water allocation, and is as follows:

> ***Objective 3***
> *Water is allocated so as to enable further economic development, while:*
>
> *(a) protecting the mauri of the waterbodies;*
> *(b) ensuring that water quality is not decreased;*

(c) *ensuring flow variability is maintained and that flows of between 1.5 and 3 times the median flow required to flush periphyton and mobilise gravel and reset the bed of the mainstem of the Hurunui and Waiau rivers are not adversely effected;*
(d) *ensuring that the water temperature is not unnaturally increased to levels which affect salmonid species;*
(e) *protecting the ability of native fish, salmon and trout to traverse the river from the marine environment to upstream habitats;*
(f) *protecting the reliability of supply for existing abstractors; and,*
(g) *maintaining the ability to navigate the river by Jet Boat;*

234. The policies within this section of the HWRRP that are intended to achieve this objective are:

a. Policy 3.1, which specifies the size of the A allocation blocks proposed for both the Waiau (18 cumecs) and Hurunui (11 cumecs) River Catchments. This is discussed in **this section** of this report;

b. Policy 3.2 which directs that no resource consents should be granted to exceed the specified allocation blocks in Table 1. This is discussed in **this section** of the report;

c. Policy 3.3 which directs that where consented abstractions already exceed an allocation block, there shall be no reallocation of surrendered, lapsed or expired consents that are not applied to be replaced under s124 of the RMA. This is discussed in **this section** of the report;

d. Policy 3.4 which seeks to enable water to be taken and used out of stream, from the specified B Allocation Block. This is discussed in **this section** of the report;

e. Policy 3.5 which seeks to enable water to be taken and used out of stream, from the specified C Allocation Block, provided that the matters listed within the policy are maintained. This is discussed in **the C Block Allocation section** of this report;

f. Policy 3.6 which seeks to enable water to be discharged from non-consumptive activities within the Waiau and Hurunui River Catchments provided that the matters listed within the policy are maintained downstream of the point of take. This is discussed in **this section** of the report.

235. There are a number of rules within the HWRRP to implement these policies. These are discussed within the sections of this report where they are relevant.

236. The following sections of this report identify the relevant provisions of other statutory documents, and then address changes sought by submitters to Objective 3, and then to its related provisions.

11.2 Statutory Provisions

237. In my view, there are a number of provisions in the NPSFM that are relevant to this section of the HWRRP. These are Objectives A2, B1, B2, B3 and C1

and Policies B1, B2, B5, B6 and C1. Collectively, these provisions seek to safeguard the life-supporting capacity, ecosystem processes and indigenous species of fresh water, address over-allocation in water quantity and quality, and maximise efficiency, to integrate the management of the fresh water resource when setting plan provisions.

238. I also consider Objective 1, Policy 1 and Policy 2 of the RPS are relevant to the setting of allocation blocks. It is my view, that what is required in order to give effect to the RPS, is for water allocation levels to be set which ensure those matters listed in Objective 1 are respectively safeguarded/ protected/ preserved/ maintained, or in relation to the natural character of lakes and rivers, outstanding natural features and landscapes, significant habitat of trout and salmon, and amenity values, that adverse effects are remedied or mitigated.

239. Those provisions in the PRPS that I consider to be relevant are Objectives 7.2.1 and 7.2.3, and Policies 7.3.4 and 7.3.9. In relation to these, it is my view that the PRPS directs that water allocation regimes should sustainably manage the water resource to enable its use, subject to the identified matters being protected or provided for, and to do so in an integrated way.

11.3 Stem of Objective 3

240. It is my view that at a general level, Objective 3 seeks to allocate water so as to enable further economic development, while ensuring that a number of matters are addressed. I note that the objective, or its general intent is supported by a number of submitters[30] on the general basis that it enables economic development, while providing for cultural, environmental and recreational values.

241. Meridian Energy Ltd (Submitter 80) seeks changes to the wording of the main stem of this objective, so that it reads: "*Water is allocated so as to enable further local, regional and national economic and social development..."* so that the objective more fully recognises these matters. In my view the additional wording is not necessary, because '*further economic development"* already covers all forms (local, regional and national) and in my view, social development is a consequence of economic development, rather than being an outcome of water allocation in itself.

242. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seeks that the objective be redrafted so that any activities listed for protection within it (i.e. parts (a) – (g)) are given precedence over the economic aspirations of the stem of the objective, as they consider these would make the objective consistent with the vision and principles of the CWMS. It is my view that the objective seeks to enable water allocation (a natural resource), to enable economic development (and thus provide for social, economic and cultural wellbeing), while identifying what matters must be addressed in order to sustain the potential for the water resource to meet the needs of future generations, safeguard the life-supporting capacity of water and ecosystems and avoid, remedy or mitigate adverse effects of water allocation on the environment. At a general level, and notwithstanding recommendations I make to the specific

[30] Water Rights Trust Inc, Hurunui District Council, Ravensdown Fertiliser Co-operative Ltd, Federated Farmers of New Zealand, Hurunui Water Project Ltd, DairyNZ Inc (Submitters 48, 88, 102, 123, 127 and 134).

wording of the parts of the objective, I consider the objective, in combination with policies and rules that are to achieve it, are appropriate to achieve the purpose of the RMA, and do not prioritise economic aspirations in a way that is inconsistent with the RMA. Further, in my view, the objective is consistent with the vision and principles of the CWMS. Similar comments are also made in a further submission by DairyNZ Inc (Submitter 134), who opposes the changes sought by Te Rūnanga o Ngāi Tahu and others (Submitter 116), on the basis that in their view, it is appropriate for economic considerations to be on the same par as other well-beings, because this is consistent with the purpose of the RMA.

243. Amuri Irrigation Company Ltd (Submitter 83) seeks that the objective be amended to include that water is allocated "*on a first in, first served basis"*, as they consider that this is appropriate and efficient, and avoids difficulties with setting allocations for a particular use, and in their view recognises and responds to issues of priority and derogation. While I agree that water is generally allocated on a first in, first served basis, it is my understanding that this is something that has been established through case law, to the extent of applications being lodged first, having priority to be heard and determined first. However, in order to meet various targets within the HWRRP, and in having particular regard to the first and second order priorities of the CWMS, the Plan does allocate some water to the first order community and stock drinking water supplies (refer Policies 1.2 and 1.3, as well as '**Resource Consent Management'** section of this report). Therefore it is my view that the wording sought by the submitter would be inconsistent with these policies and the objective, and as such is not appropriate. Further, it is my view that the actual assessment of any application should be based on its merits, rather than it just being first.

11.4 Amendments to Parts (a) – (g) of Objective 3

Part (a)

244. Any amendments sought to part (a) of the objective are addressed in the **'mauri'** section of this report.

Part (b)

245. Water Rights Trust Inc (Submitter 48) supports the wording of part (b) of this objective. Meridian Energy Ltd (Submitter 80) seeks that (b) is altered as follows: "*ensuring that water quality is not <u>significantly</u> decreased <u>as a result of the water allocation</u>*", in order to better qualify that the effects to be considered relate to water allocation, not minimum flows, and to make it more effective and achievable. It is my view that specific reference to water allocation is not necessary, as the stem of the objective is clear that it only pertains to the allocation of water. For reasons outlined elsewhere in this report, it is my view that more than just significant effects should be considered. It is also my view that what is sought by the submitter would not give effect to Objective A2 of the NPSFM, which seeks that the overall quality of freshwater (within a region) is maintained or improved.

246. Ravensdown Fertiliser Co-operative Ltd (Submitter 102) seeks that (b) is altered so that rather than requiring that water quality "*is not decreased*", it requires that "*issues relating to nuisance periphyton or toxic cyanobacteria are addressed*". Similarly Hurunui Water Project Ltd (Submitter 127) seeks

that water quality is "*maintained*", by controlling these factors. Both these submitters consider that these changes are necessary because they have concerns with the assumption that 100,000ha can be irrigated without further affecting nutrient limits, how effects of land use change on water quality will be determined, the reliability of data in Schedule 1, and the use of SH1 Bridge as a benchmark location. I firstly note that a number of these concerns are addressed more fully in the **'Water Quality'** section of this report. In relation to this objective, it is my view that periphyton and toxic cyanobacteria are effects that can result, in part, from water quality contaminants entering water bodies. It is my view that it is more appropriate that the HWRRP seek to manage those contaminants through rules and policies relating to them, with the objective describing the environmental outcome sought, rather than in itself addressing how it is to be achieved.

247. Ngāi Tahu Property Ltd (Submitter 121) seeks that rather than requiring that water quality "is not decreased", it is required that it "*remains suitable for the uses and values supported by the Waiau and Hurunui rivers",* on the basis that the current wording is unclear and is not related to the values and uses of the river. As noted above, I have concerns that such wording would not give effect to Objective A2 of the NPSFM, which seeks that the overall quality of freshwater (within a region) is maintained or improved. I also note that in considering water quality, the ZC has had to consider the values and uses associated with these rivers, and come to the consensus view that water quality of the Hurunui River should be maintained or improved, in order to protect these values and uses[31]. It is my view that this is more appropriately captured by the current wording.

248. It is however my view that as sought by Hurunui Water Project Ltd (Submitter 127), "maintain" is more appropriate than "not decreased" as the latter implies a quantitative assessment for what is a qualitative measure. While the Plan does contain quantitative measures for how achievement of water quality outcomes is to be ensured (and further changes are recommended), it is my view that it is appropriate that these are included within the policies and rules, rather than the objective itself. It is further my view that reference to maintaining water quality is consistent with purpose of the RMA, as it provides for the avoidance, remediation or mitigation of adverse effects on water quality, in order to ensure the quality is maintained.

Part (c)

249. Meridian Energy Ltd (Submitter 80) also seeks changes to part (c) of the Objective, to refer to "sufficient" flow variability, rather than requiring that these flows are not adversely affected at all, in order to make it more effective and achievable. It is my view that the changes are appropriate, as in my opinion, they better define the values that are sought to be ensured. In this case, it is my view that there will be changes on flow variability from water allocation, but that this in itself does not need to be retained, rather it is the sufficiency of these flows to address periphyton and mobilise gravel that is important. In particular I refer to the evidence of Dr Snelder that discusses the importance of mid-range flows in relation to various physical and ecological processes.

[31] For example, refer to p. 34 of the ZIP, which notes one of the key water quality outcomes is that the Hurunui River is safe for contact recreation.

250. Amuri Irrigation Company Ltd (Submitter 83) seeks that part (c) be amended to refer to "unacceptable" adverse effects, and for the same reasons set out in relation to other submission points, I do not consider this appropriate. However, I consider that the amendments sought by Meridian Energy Ltd (Submitter 80) address this submitter's concerns as well, that the current wording implies that there are to be no adverse effects on flow variability, and that this is not consistent with the RMA approach. Similarly, Ngāi Tahu Property Ltd (Submitter 121) seeks changes to this part of the objective to make it more accurate and ecologically correct, and as per their submission on Policy 2.5. Consistent with my recommendations in relation to Policy 2.5 in the **'Minimum Flows'** section of this report, I recommend that their amendments are included in Objective 3(c) insofar as I have recommended amendments to Policy 2.5 and consistent with the evidence or Dr Snelder.

Part (d)

251. Department of Conservation (Submitter 90) seeks amendments to part (d) so that it applies to native fish and invertebrate species, as well as salmonids. In this regard, I note that while Ngāi Tahu Property Ltd (Submitter 121) seeks that part (d) is deleted in its entirety (as they consider the matter can be addressed through changes to part (b)), they also make more general comments that the Plan refers to fish differently in different provisions. It is therefore my recommendation that part (d) is amended to refer to "*native fish, salmon and trout"* consistent with other parts of the Plan. This is to ensure internal consistency within the HWRRP, and also because trout and salmon, rather than *"salmonids*", is consistent with s7(h) of the RMA.

252. Similar to other submission points, Meridian Energy Ltd (Submitter 80) seeks that part (d) specifically refer to water allocation, and again, my view is that this is not necessary, as the stem of the objective is clear that it only pertains to the allocation of water. They also seek that only significant effects are referred to. Amuri Irrigation Company Ltd (Submitter 83) again seeks that this part refers to "*unacceptably*" adverse effects rather than any adverse effects. For reasons outlined elsewhere in this report, it is my view that more than just significant or unacceptable effects should be considered. However, I do consider that the current wording suggests that any effects on water temperature (because any changes in water temperature will have some effect) are to be avoided, and in my view this is not appropriate, as it does not adequately allow for some change that might still be acceptable for native fish, salmon and trout nor does it allow for avoidance, remediation or mitigation of such effects. I consider that the concerns of the submitters can be addressed through the following wording:

> *(d) ensuring that the water temperature is not unnaturally increased to levels which ~~affect~~ <u>are unsuitable for native fish, salmon and trout</u> ~~salmonid species~~.*

Part (e)

253. Meridian Energy Ltd (Submitter 80) seeks that rather than "*protecting the ability of"* native fish, salmon and trout to traverse the river, that part (e) refer to "*ensuring"* that these fish "*can continue to"* do so. This is because they consider the current wording to be too absolute, and consider amendments are needed to make it more effective and achievable. Amuri Irrigation

Company Ltd (Submitter 83) considers that the requirement to "protect" this ability may not be appropriate in all instances, and that the threshold proposed is too high. They seek that the part is reworded so that the adverse effects are avoided, remedied or mitigated to the extent that they are acceptable.

254. In my view, that is more appropriate to provide for instances where on balance, the effects on fish passage may be able to adequately mitigated or remediated. Therefore I consider that Part (e) should be amended. However, I do not consider it necessary to include "*to the extent that they are acceptable"*. I note that the rules which (in combination with the relevant policies) are to achieve this objective, generally seek protection of fish passage (i.e. avoidance of adverse effects) such as through a condition or standard and term. Therefore where fish passage is not maintained, a higher level consent process will be triggered, which in my view appropriately allows for mitigation and remediation for the effects of this to be considered. Ngāi Tahu Property Ltd (Submitter 121) seeks that the same wording as used in Objective 2(c) is used ("*Upstream and downstream passage of native fish, salmon and trout*"). However because the stems of the two objectives are different I note that this wording would not make sense. I therefore recommend the following wording:

> *"~~protecting~~ ensuring that adverse effects on the ability of native fish, salmon and trout to traverse the river from the marine environment to upstream habitats are avoided, remedied or mitigated"*

Part (g)

255. Meridian Energy Ltd (Submitter 80) seeks that part (g) be amended to refer to "*providing opportunities"* for jet boats to navigate the river, rather than "*maintaining the ability*" to do so. They consider this to be more consistent with the first and second order priorities of the CWMS. Hurunui Water Project Ltd (Submitter 127) seeks that (g) be deleted but replaced with "*providing sufficient water for jet boaters to traverse those parts of the mainstems of the Hurunui and Waiau Rivers that make these rivers a regionally significant jet boating destination*." This is on the basis that the current wording implies that the entire river is to be maintained for navigation by jet boat, when this is not currently the case during parts of the year, and that it should instead focus on maintaining the existing opportunities. Ngāi Tahu Property Ltd (Submitter 121) seeks that (g) refer to maintaining "*the existing recreational amenity of these waterbodies*" on the basis that only one recreational use is referred to, when others should be. Department of Conservation (Submitter 90) seeks amendments to (g) to refer to "*kayakers and jet boaters*" rather than "*Jet Boats*". Whitewater Canoe Club Inc and Whitewater NZ Inc and Mr Ian Fox (Submitters 95 and 109) also seek that (g) be amended to also refer to being able to navigate the river by kayak.

256. It is my view that Objective 2(h), which relates to ensuring minimum flows are sufficient for recreational activities, is sufficient to address maintaining recreational amenity more generally, and that this does not need to be repeated in this objective which relates to setting allocation limits. In my view, Objective 3(g) however, seeks to ensure that allocation of water above the minimum flow also maintains the ability for jet boats to navigate the river. It is my view that "providing opportunities" is not sufficiently clear, as some opportunities could still be provided (and thus meet the objective), but be

significantly reduced from the current opportunities, which in my view could significantly detract from the current recreational amenity values of the river. Similarly, referring only to regionally significant jet boating destinations does not take into account that this type of activity and the amenity values derived from it pertain to a journey, rather than a destination. To ensure that amenity values are maintained for kayakers, I also consider that it is appropriate for the objective to also refer to kayaks. I therefore recommend that part (h) is amended as follows:

"*maintaining the ability to navigate the river by Jet Boat and kayak"* .

11.5 New Parts to Objective 3

257. Gore Bay and Port Robinson Ratepayers Association Inc (Submitter 43) seeks that the following additional part is added to the objective to ensure that any reduction in flows does not compromise gravel and sediment transport: "*ensure existing river mouth and coastal processes (including sediment supply) are* maintained". It is my view that consideration of mobilising gravel is already addressed under part (c) of this objective. I also note that the submitter's concerns appear to relate more to reduction of flows, rather than allocation, and in this regard note that specific consideration is given to river mouth opening under Objective 2(f).

258. Department of Conservation (Submitter 90) seeks that "*protecting the natural character of braided rivers*" is added to the objective, on the basis that this is necessary to meet the responsibilities of s6 of the RMA. I also note that Policy 7.3.2 of the PRPS, seeks to maintain the natural character of braided rivers through a number of listed measures. While the listed measures in the PRPS do not pertain to water allocation, it is my view that this is an appropriate matter to consider in relation to water allocation as well. This is because it is the allocation of water, which in turn affects the variability of residual flows, rather than the minimum flow that is likely to have adverse effects on the natural processes that create and maintain the river's braided nature. These processes are discussed in the evidence of Dr Snelder and Dr Hicks. I therefore agree with the submitter that it should be included in the objective. I also note that Royal Forest and Bird Protection Society (Submitter 136) seeks the following additional matter: "*Sufficient flows to maintain natural character and braided river processes*". I note in relation to this wording, that it relates to flows, rather than to allocation; the former being what Objective 2 seeks to address, with the latter relating to Objective 3, and therefore do not recommend this wording is added. However, in my view, the changes sought by Department of Conservation (Submitter 90) should also address the concerns of Royal Forest and Bird Protection Society (Submitter 136).

259. Department of Conservation (Submitter 90) also seeks that "*protecting native/indigenous biodiversity values*" is added to the objective, on the basis that this is necessary to meet the responsibilities of s6 of the RMA. It is my view that this addition is not necessary in that while it provides for a general aim consistent with the RMA, the objective already identifies those specific matters, relevant to this zone, that need to be protected, such as flow variability and fish passage.

260. Fish and Game New Zealand and Ms Eugenie Sage (Submitters 113 and 139) seek an additional matter to require the maintenance of flows needed for salmon angling on the basis that the Hurunui and Waiau Rivers are regionally

significant for salmon angling and accordingly the allocation of water needs to ensure that these recreational opportunities are maintained. It is my view that this is already addressed under (e), as if the ability for salmon to traverse upstream is provided for, then salmon angling will also continue to be provided for.

261. Mr Michael Singleton (Submitter 2) seeks that an additional matter is included "*for the maintenance of an open river bed for indigenous bird habitat*". Ms Eugenie Sage (Submitter 139) seeks that the objective includes a requirement to "*maintain the flows needed to improve ecological health and functioning including habitat for braided river birds*" in order to ensure that the ecological functioning and health of the rivers and their natural character are protected. In relation to the latter it is my view that there is an inherent tension in seeking to both 'maintain' and 'improve'. Overall, it is my opinion that this is a matter that is more appropriately addressed through the changes sought by Department of Conservation (Submitter 90) in relation to protecting the natural character of braided rivers. This is on the basis that the habitat values of these rivers relate to their braided nature, (which are discussed by Dr Hughey), and therefore through protecting the rivers' natural braided character, what is sought by these submitters will also be achieved.

11.6 A Allocation Block Size (Policy 3.1)

262. Policy 3.1 specifies the size of the A allocation blocks proposed for both the Waiau (18 cumecs) and Hurunui (11 cumecs) River catchments. Mr Warren Higgins, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 45, 113 and 136) support the policy. Ms Eugenie Sage (Submitter 139) supports the policy subject to other amendments sought which are discussed elsewhere in this report.

263. Mr John Talbot and Independent Irrigators Group (Submitters 1 and 92), in relation to the Waiau River, seek that the policy is amended so that the A Block is 18 cumecs plus on-hold consents. It is my understanding that the A Block Allocation for the Waiau River is currently over-allocated. Policy B6 of the NPSFM directs that regional councils set defined timeframes and methods in plans in order to phase out such over-allocation. In line with this, the HWRRP provides direction and methods for how this over-allocation is to be reduced. It is my view that what the submitter seeks, is effectively for the Allocation Block to be increased so that it is not over-allocated, and therefore there will not need to be reduction of this allocation over time and through the methods proposed in this Plan. It is my view that this would not be appropriate, nor would it give effect to the NPSFM.

264. Mr John Talbot, Phoebe Irrigation Ltd and Independent Irrigators Group (Submitters 1, 86 and 92) also seek, in relation to the Waiau River, that the policy is amended so that the allocation regime applies only to mainstem of Waiau, not to the catchment as a whole. I note however, that this approach would effectively lead to the same issue arising as above – as if the allocation block is applied to the mainstem only, with tributaries having separate allocation blocks, this in effect results in a larger allocation, with potential effects on reliability and instream values. Again, it is my view that this would not give effect to the NPSFM. It is further my view, that because it is proposed that the minimum flow regime applies to both the mainstem and the tributaries, it is consistent to apply the same approach to allocation blocks. In

my view, this provides for a more integrated approach to managing the water resource within the relevant catchment in accordance with Objective C1 of the NPSFM and Objective 7.2.3 of the PRPS.

265. I note that the above submitters also seek that the related paragraphs in the sub-section '*Allocation of Water'* in Part of the Plan are deleted, in part due to their submission above, and in part because the explanatory paragraphs state that the taking of water from tributaries could compromise mainstem flows, therefore requiring that the Allocation Block is the sum of all takes from the mainstem and tributaries. They consider that this statement is hydrologically incorrect because the individual tributaries have their own minimum flows and block allocations. Because I have not recommended that the allocation regime is amended to apply only to the mainstem, I similarly do not recommend that the explanatory paragraph is deleted. I do however recommended the following amendments to the explanatory paragraphs, which I consider partially address the submitter's concerns and provide greater clarity:

> "*While the majority of abstraction is from the mainstem of the Hurunui and Waiau rivers, there is also a significant volume of water taken from the tributaries of the Hurunui and Waiau rivers. ~~If too much~~As water ~~is~~ taken from the tributaries ~~it could potentially result in~~reduces the flows in the mainstems, ~~being compromised. T~~this Plan ~~therefore~~ sets a limit on the total amount of run of river abstraction (A Block takes) for the entire catchment, in order to manage the water resource in a more integrated way."*

266. Hurunui District Council (Submitter 88) supports the policy as it pertains to Waiau, but in relation to Hurunui seeks that the policy be amended so that the A Allocation Block is reduced to 11 cumecs after the development and commissioning of water storage of at least 20 million m^3. This is on the basis that the current regime for the Hurunui River should be retained until after storage is developed and commissioned, unless it is demonstrated that the in-river values are compromised under the existing flow regime, or there are substantial changes to A Block use, or if B Block takes substantially increase. They consider that this is necessary to ensure reliability of supply for existing users, and thus to meet Objective 3(f) due to reliability of supply to existing users. I note that if the Policy was amended as sought by the submitter, and should one of the situations outlined by them occur (e.g. A Block use increases) this could only be addressed through a Plan Change, and in my view this is not effective or inefficient. Related to this, Amuri Irrigation Company Ltd (Submitter 83) seeks that the policy is amended to allow for their existing take of $5m^3/s$ from the Hurunui River to be held in a separate A Block, with this having priority over the remainder of the currently allocated A Block water, which they consider is necessary to maintain their reliability of supply.

267. The effects on reliability from the removal of the current banding system have been assessed by Aqualinc, and discussed in the **'Minimum Flows'** section of this report. I again note their conclusion that irrigation reliability for Hurunui River users would still be good under the proposed allocation regime[32]. I also

[32] Aqualinc (17 March 2011) "Hurunui irrigation reliability and production modelling". Memorandum to Environment Canterbury by Peter Brown of Aqualinc Research Ltd.

consider that any effects on reliability need to be considered alongside other outcomes sought by the Plan, including those relating to instream values and increased efficiency.

268. Te Rūnanga o Ngāi Tahu and others (Submitter 116) raises concerns that the flow and allocation regime proposed could result in the flows being held at artificially low levels for long periods of time, and in particular that the flow variability sought in the Plan objectives (relating to both flows and allocation blocks) to provide flushing flows etc, will not be achieved by the proposed regime. For example they consider that flows of between 1.5 and 3 times the median are only provided for and protected within the C Block Allocation. The regime could, in their view, have significant effects on mauri, the relationship of Ngāi Tahu to the river system, and the ability for them to collect mahinga kai.

269. Extending beyond this, Mr W and Mrs J Demeter (Submitter 125) seek that all those matters listed as parts (a)-(i) in Policy 3.5 be applied to Policy 3.1. It is my view that this is not necessary, as the A Block has been set on the basis that it is sufficient to meet the Plan's objectives (and therefore already meets the matters set out in Policy 3.5). For example, Dr Snelder, Dr Jellyman and Dr Hicks, have provided evidence on the potential effects of flow allocation regimes on periphyton cover, fish migrations, and sediment transport and river channel morphology, and how these matters relate to mid-range flows. It is my view that extending the Policy could therefore create an unnecessary level of complication to consent applications, with further information being sought on these matters, even though the technical evidence has, in my view, adequately established that the allocation is appropriate, and provides for flow variability to implement the Plan's policies and achieve its objectives.

11.7 B Allocation Block Gap Size

270. The Table 1 Regime contains 'gaps' between some specified allocation blocks. On page 8 of the HWRRP, these gaps are described as providing protection to "*ecologically significant freshes*". The gap proposed between the A and B Block allocations for all takes within the Waiau River Catchment and on the mainstem is 2 m^3/s. Some submitters[33] argue that this gap does not serve any ecological purpose, and will affect reliability of supply for B Block consents, and seek that this gap is removed, with the minimum flows for the B and C Blocks being consequentially reduced by 2 m^3/s. Ms Sage (Submitter 139) seeks that an 18 cumec gap is provided between the A and B allocation blocks.

271. I consider that the explanation within the HWRRP relating to the gap should be amended to properly reflect the intention of the gap. This is based on my understanding that the proposed gap between the A and B Blocks in the Waiau River relates to the A Block being currently over-allocated, with the gap therefore providing a buffer between the actual allocation under the Plan of 18m^3/s, and the minimum flow for B Allocation Block takes. While the Plan provides direction and methods for how this over-allocation is to be reduced (and in line with the direction to do so under Policy B6 of the NPSFM), it is my view that removing this gap, prior to this being resolved, would not assist in

[33] Mr John Talbot, Meridian Energy Ltd, Independent Irrigators Group and Ngāi Tahu Property Ltd (Submitters 1, 80, 92 and 121).

giving effect to the NPSFM. Therefore I consider it more appropriate for the gap to be retained, but consider that the explanation within the HWRRP relating to the gap (Under '*Allocation of Water',* p. 8), should be amended to clarify its purpose, and in line with changes sought by Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) to this explanation.

272. The gap proposed between the A and B Block allocations for all takes from the Hurunui River mainstem varies between having no gap (May to August), a $5m^3/s$ gap (September – January) and an $8m^3/s$ gap (February – April), prior to the specified amount of storage being developed, with the latter gap reduced to $5m^3/s$ gap when storage is provided. Fish and Game New Zealand (Submitter 113) seeks that the gap be retained at $8m^3/s$ even after storage is developed, on the basis that it is required to provide for salmon migration and angler amenity. I note that while the gap would be reduced by $3m^3/s$ following the specified amount of storage being provided, this would happen concurrently with the minimum flow during those three months being increased by $3m^3/s$. As such, it is my view that provision for salmon migration and angler amenity will be maintained at the same levels as those provided prior to storage.

11.8 Activity Status (Policy 3.2)

273. Policy 3.2 specifies that no resource consents to take, dam, divert or use water should be granted if it would cause the Regime in Table 1 to be exceeded at any time, and at any point on the river. A number of submitters[34] seek retention of this policy, as does Ms Eugenie Sage (Submitter 139).[35]

274. Mr John Talbot (Submitter 1) seeks deletion of the words "*to be exceeded at any point on the river and at any given time*" from Policy 3.2. I note that this part of the policy has been included to ensure that water can be allocated to two or more activities as long as at any given point in the river and at any given time the allocation block is not exceeded. Therefore water could be reallocated below a non-consumptive take, where the non-consumptive take has returned that water to the river, or water could be allocated to hydroelectric generation and irrigation as long as at any given time water is being used for only one use. It is my view that this is an efficient use of water and is appropriate to include in the policy to ensure the Plan's objectives are met.

275. Hydrotrader Ltd (Submitter 72) seeks deletion of Policy 3.2, on the basis that the Policy is implemented through a proposed prohibited activity status under Rule 5.2, and therefore also seeks that Rule 5.2 becomes a non-complying activity. Amuri Irrigation Company Ltd (Submitter 83) also seeks that this rule has a non-complying activity status. Because Rule 5.2 directly implements Policy 3.2, which together are intended to achieve the Plan's objectives, I consider it important to consider these two provisions together. In this regard I note the support of this rule by Water Rights Trust Inc, Hurunui District Council, Fish and Game New Zealand, Te Rūnanga o Ngāi Tahu and others

[34] Department of Conservation, Fish and Game New Zealand, Te Rūnanga o Ngāi Tahu and others and Royal Forest and Bird Protection Society (Submitters 90, 113, 116 and 136).

[35] Subject to changes sought to Table 1 being made, which are addressed elsewhere in this report.

and Royal Forest and Bird Protection Society (Submitters 48, 88, 113, 116 and 136). Department of Conservation (Submitter 90) also supports the rule, subject to amendments being made to Table 1 in relation to the C Block Allocation (which is addressed elsewhere in this report). Federated Farmers of New Zealand (Submitter 123) seeks that the rule is deleted unless Table 1 is amended in line with their other submission points, and again, this is addressed elsewhere in this report.

276. Mr John Talbot (Submitter 1) seeks minor amendments to the rule such that it uses the phrase "*does not comply with*" rather than "*is not consistent with*". It is my view that the wording suggested by Mr John Talbot (Submitter 1) (regardless of the activity status) provides greater clarity and is therefore more appropriate.

277. In relation to the activity status of the rule, Hydrotrader Ltd (Submitter 72) argues that by making such activities prohibited, there is no opportunity to test the evidence, which they consider may be appropriate in future following further investigations. They consider that the non-complying activity status provides for the merits of a proposal to be rigorously tested against the plan provisions. Amuri Irrigation Company Ltd (Submitter 83) makes similar comments in relation to being able to consider proposals on their merits.

278. I agree with these submitters at a general level, that a prohibited activity status sets a very high bar that does not allow for any consideration of the merits of a proposal, or for new information to be taken into account because it does not allow for a consent application to even be made. As I understand it, the use of the non-complying activity status for exceedances of allocation block limits has, in the past, resulted in an incremental undermining of these limits as consents for smaller takes beyond this limit have been granted. However, this has resulted in community concern that these limits are unenforceable and that the issuing of such consents will lead to cumulative adverse effects on these waterways, without sufficient 'teeth' being provided in plans to avoid this occurring. It is my understanding that this concern has been the driver behind the prohibited activity status.

279. In considering the most appropriate planning provisions - activity status and policy wording - to achieve the objectives of the Plan, I consider it important to note that this rule and policy position sit, in my view, at the bottom of a cascade approach. By this I mean that once A Block water is allocated, while no further water can be applied for within this allocation block, B Block water can be applied for (as a restricted discretionary activity, subject to meeting standards and terms). Once the B Block is allocated, C Block water can be applied for (as a discretionary activity, subject to meeting standards and terms). The C Block allocation is discussed further in this report, but for the purposes of this discussion, it is important to note that it is relatively large. As such, it is my view that the prohibited activity status only applies at a very high threshold.

280. As discussed in the C Block Allocation section of this report, the evidence of several of the technical experts is that full allocation of the C Block is unlikely to meet the Plan's environmental, cultural and recreational outcomes. Based on this, it is my view that it is clear that the effects of allocation beyond Table 1 are not appropriate, nor will they meet the Plan's objectives. Given that this threshold is set at a very high level, I consider that it is appropriate for allocation beyond this to be a prohibited activity, with a correspondingly strong policy. It is my view that this gives effect to Policy B5 of the NPSFM, as

the prohibited activity status ensures that no decisions can be made that are likely to result in future over-allocation.

281. For completeness, I note that my view on the prohibited activity status is also based on my view that the proposed approach to the C Block Allocation be largely retained (discussed elsewhere in this report). My view is that if the C Block Allocation is substantially reduced, a prohibited activity status beyond a lower threshold may not be more appropriate than a non-complying status. This is because of the limited information that is known about the effects of a smaller allocation of C Block water, which in my view means that the door should not be closed (through a prohibited activity status) on consideration of proposals on their merits, if this limit is lower.

11.9 Policy 3.3

282. Policy 3.3 seeks to ensure that where all consented abstractions exceed an allocation block, no reallocation of water shall arise from surrendered, lapsed or expired consents that have not been applied to be replaced. A number of submitters[36] seek retention of this policy, as does Ms Eugenie Sage (Submitter 139).[37] Te Rūnanga o Ngāi Tahu and others (Submitter 116) seeks changes to Policy 3.3 that effectively relate to transfers, and are therefore addressed in the section of this report that relates to transfers. It is my view that the proposed policy is an appropriate way to achieve the objectives of the Plan, because it seeks to address over-allocation (and its consequential effects that the Plan aims to avoid) in a way that has, in my view, the least effect on existing abstractors, and in my view also assists with the efficiency aims of the Plan. It is also my view that this approach will assist in giving effect to Policy B6 of the NPSFM, through providing a method in this Plan to address the phasing out of over-allocation, which in turn will assist in giving effect to Objective B2 of the NPSFM.

11.10 B Allocation Block (Policy 3.4)

283. Policy 3.4 seeks to enable water to be taken from the B Block Allocation set for the mainstem of both the Hurunui and Waiau rivers and used for out of stream uses. The Policy itself is generally supported by Fish and Game New Zealand, Federated Farmers of New Zealand and DairyNZ Inc (Submitters 113, 123 and 134). Mr B and Ms J Demeter (Submitter 125) seeks that all those matters listed as parts (a)-(i) in Policy 3.5 (which applies to the C Allocation Block) be applied to Policy 3.4 (which applies to the B Allocation Block). As noted earlier, Te Rūnanga o Ngāi Tahu and others (Submitter 116) have concerns that the proposed flow and allocation regime could result in the flows being held at artificially low levels for long periods of time, and the flow variability sought in the Plan objectives not being achieved by the proposed regime.

284. As with the comments above in relation to the similar submission on Policy 3.1 (applying to the A Allocation Block) I note that extending the Policy could therefore create an unnecessary level of complication to consent applications,

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[36] Hurunui District Council, Department of Conservation, Fish and Game New Zealand, Te Rūnanga o Ngāi Tahu and others, and Royal Forest and Bird Protection Society (Submitters 88, 90, 113, 116 and 136).

[37] Subject to changes sought to Table 1 being made, which are addressed elsewhere in this report.

with further information being sought on these matters. In particular, I note that applicants who seek a relatively small amount of B Block water may be required to undertake relatively detailed studies that mean applying for this water becomes cost prohibitive for smaller allocations.

285. Balanced against this however, is the evidence of Dr Snelder, Dr Jellyman and Dr Hicks. Dr Snelder notes that allocation of all A and B Block water in the Waiau River (referred to as Scenario 4) may only possibly achieve no increase in the proportion of occasion that filaments exceed 20% cover (in the Hurunui, this is assessed as possibly or probably met at State Highway 1 and at Mandamus respectively). Dr Jellyman notes that prolonged periods without flow variation can negatively impact on a range of physical and chemical conditions that influence fish behavior and well-being. In relation to the Hurunui River the provision for the migration of native fish and salmonids at the mouth opening is assessed as unlikely to be achieved with allocation of all A and B Block water (referred to as Scenario 2). Dr Hicks also considers that it is unlikely that river mouth opening is maintained or no less stable in relation to the Hurunui River under Scenario 2, although I note that this assessment is made in relation to the reference condition being the natural flow regime rather than the status quo regime. I also note his comments that the assessment has been based on takes continuing during freshes and floods, and that the effects could be mitigated, potentially to the level of almost certainly meeting HWRRP objectives, with flood bypass rules.

286. Related to this, Port Robinson Informed Citizens Inc (Submitter 51) seeks that rules be included in the Plan to require takes and diversions to cease, to allow floods and freshes to pass for a specified number of hours to maintain gravel movement, weed control, and ecosystem health. It is my view that such a rule is unlikely to be the most appropriate way to address this matter, particularly in relation to smaller takes that would have minimal impact on freshes and floods. Assessment, on a case by case basis of applications against Policy 2.5 and Objective 3, with the ability to impose consent conditions when appropriate, is in my view more efficient and effective.

287. However, in line with the concerns raised by Mr B and Ms J Demeter (Submitter 125), and Te Rūnanga o Ngāi Tahu and others (Submitter 116), and given the evidence above in relation to the B Block, I have some concerns that the matters for discretion in relation to B Block takes are not wide enough to ensure that the matters assessed by Dr Snelder, Dr Jellyman and Dr Hicks are able to be addressed through the consent process. It is my view that in order to implement Policy 2.5 and achieve Objective 3, such discretion is necessary. As noted above, this does need to be balanced against the additional costs to applicants who seek a relatively small amount of B Block of potentially having to undertake more detailed studies. In this regard, I recommend the following matter for discretion is added to Rule 2.3:

> "*(x) In relation to the B Allocation Block, any measures required to mitigate the effects of the take or diversion on geomorphological processes".*

11.11 Unspecified B and C Allocation Blocks

288. Mr John Talbot (Submitter 1) notes that in Part 4 - Table 1, several tributary regimes state that "*No B or C Allocation Block is specified for these tributaries."* The submitter argues that it is uncertain what this means and

seeks that if it is intended that no further allocation is allowed, this should be specified by stating "*Nil*" in the relevant column, or by clarifying what the term is intended to authorise.

289. It is my view that it is not intended that no further allocation be allowed in these tributaries, but rather that none is specified given the lack of evidence as to what an appropriate allocation may be. In particular I note that some of the tributaries go further than stating that no B and C Allocation blocks are specified, and state that "*No B or C Allocation Block is specified for these tributaries, if any in-stream storage is developed it is expected that provision will be made for flow variability to achieve the requirements of this plan."* In my view if it was intended that further allocation be prohibited, it would not have made sense to include this statement.

290. However I agree with the submitter that this is not entirely clear, and my view is that the activity could be considered to be prohibited under Rule 5.2, as if there is no B or C allocation block specified, a take in exceedance of the A allocation block would arguably not comply/be consistent with Table 1. It is my view that as sought by the submitter, this could be better clarified through the following amendments to Rule 5.2, and to Table 1, to align with what I consider to have been the intent:

> *"Rule 5.2 The taking of water from the Hurunui or Waiau catchments that <u>does not comply</u> ~~is not consistent~~ with <u>the</u> Environmental Flow and Allocation Regime in Table 1, <u>is a prohibited activity,</u> unless<u>:</u>*
>
> *<u>(a) the activity status is otherwise specified in Table 1; or</u>*
>
> *<u>(b)</u> the take is for Community and/or Stock Drinking Water Supply ~~is a prohibited activity~~."*
>
> *Table 1:*
>
> "*No B or C Allocation Block is specified for these tributaries.* ***Any application to take water beyond the A Block allocation is a non-complying activity under Rule 4.2."***
>
> "*No B or C Allocation Block is specified for these tributaries, if any in-stream storage is developed it is expected that provision will be made for flow variability to achieve the requirements of this plan.* ***Any application to take water beyond the A Block allocation is a non-complying activity under Rule 4.2."***

11.12 Policy 3.6

291. Policy 3.6 seeks to enable water to be discharged from non-consumptive activities to the Waiau and Hurunui rivers and tributaries, provided that a number of matters are '*maintained'* downstream of the point of take. Department of Conservation, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 90, 113 and 136) support the policy. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) also support the policy, but seek that it require that no significant adverse effects on the matters listed in the policy result from the discharge, rather than having to maintain these matters. As discussed elsewhere in this report, I

have some concerns with the use of the word "significant", because significance may be a difficult measure and because I consider that adverse effects that are not significant still need to be appropriately managed. However, in my view, as currently worded, it is difficult to understand exactly what is required to be maintained in order for the policy to be achieved. In my view, this can however be addressed through amendments being made to parts (a) – (e) of the policy, as is also sought by these submitters.

292. Part (a) of the policy seeks to maintain macro-invertebrate populations both upstream and downstream of the discharge point. Meridian Energy Ltd (Submitter 80) seeks that the reference to upstream and downstream of the discharge point be removed, on the basis that the policy relates to discharge from non-consumptive uses, and therefore the reference to 'upstream' overlaps with Policy 3.5, which relates to the taking of C Block water. Ngāi Tahu Property Ltd (Submitter 121) seeks that (a) refers to "*sufficient invertebrate production to support fish and bird communities*". It is my view that the current wording is potentially inconsistent with the stem of the policy which only refers to matters downstream of the point of take. The changes sought by Ngāi Tahu Property Ltd, in my view, address this, and also provide greater clarity over the value that is to be maintained.

293. In relation to part (b) of the policy, Ngāi Tahu Property Ltd (Submitter 121) seeks that it refers to "*habitat and passage for native fish and salmonids*" rather than "habitat *and unimpeded passage for existing populations of native fish species, salmon and trout".* In general I consider the wording to be more appropriate as it is consistent with other parts of the HWRRP, and sufficient to meet Objective 3(e). However as commented on more generally by the same submitter, I consider it important that the Plan refers to fish consistently, and therefore recommend that it refers to salmon and trout rather than salmonids, as follows:

> "*habitat and ~~unimpeded~~ passage for ~~existing populations of~~ native fish ~~species~~, salmon and trout"*

294. In relation to part (d) of the policy, Meridian Energy Ltd (Submitter 80) seeks that "***are"*** is removed, and I agree that this is appropriate, as it reads more appropriately in conjunction with the stem of the policy, as follows:

> "*To enable water to be discharged from non-consumptive activities to the Waiau and Hurunui rivers and their tributaries provided that the following is maintained downstream of the point of take:*
>
> *…(d) bare gravel island and bars ~~are~~ free of woody vegetation for bird nesting; and…"*

295. In relation to part (e) of the policy, Meridian Energy Ltd (Submitter 80) seeks that it refers only to "*water quality".* Ngāi Tahu Property Ltd (Submitter 121) seeks that part (e) state "*the water quality of any discharge does not affect the uses and values of the river*". In my view part (e) appropriately identifies the effect to be managed – that where water from non-consumptive uses are discharged back to the river, it is in the same or better quality. This ensures that non-consumptive takes do not contribute to deterioration of water quality. In my view, this relates to the framework established in the Plan for addressing water quality, which is focussed on addressing effects of intensified land use, enabled through further water allocation, i.e. consumptive takes. This framework alone however, does not address

potential effects on water quality from non-consumptive takes that are discharged back into the river. It is my view that in order to enable more consumptive water uses, while still meeting water quality objectives, it is important to ensure that water quality is not decreased from discharges of non-consumptive takes. It is my view that this, in combination with the proposed land use controls, are appropriate to ensure that the uses and values of the river are maintained.

296. I also note, that by definition, a non-consumptive take is one "*where water is taken and discharged back to the water body in the same or better quality…"* As such, the changes sought by these submitters would not be consistent with the definition. Also, requiring that water quality generally (as sought by Meridian Energy Ltd) is maintained downstream of the point of take may be too broad, in the sense that effects on water quality may be beyond the applicant's control alone. Overall, I therefore do not consider any changes to Part (e) to be necessary.

11.13 Rule 2.3

297. Rule 2.3 assists in implementing policies 3.1-3.4, through providing for the taking, diverting, discharge and use of surface water from the A and B Allocation Blocks, in accordance with the Table 1 regime, as a restricted discretionary activity. Where some submitters have requested changes to this rule that are addressed elsewhere in this report (for example, changes to minimum flows or the size of the allocation block), they are not discussed further here.

298. Rule 2.3(b), requires that for the Waiau River, when water is allocated from the B Block for irrigation, at least 6 m^3/s must be taken and used downstream of the Stanton River. Mr John Talbot (Submitter 1) seeks that this is either deleted, or substantiated. Federated Farmers of New Zealand (Submitter 123) specifically supports this standard and term. I note that the reason for the standard and term is discussed in the evidence of Mr Parrish and arose as a result of community feedback and technical investigations of irrigable land areas, and ultimately seeks to ensure that some water is reserved for irrigation of the lower Waiau area. Based on Mr Parrish's explanation, it is my view that the proposed standard and term is appropriate, and addresses demonstrated community concerns. It is my view that given these concerns, the standard and term is necessary to provide for the economic well-being of a particular portion of the Zone, and is therefore appropriate.

299. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121), seek that part (d) be deleted, because Chapter 7 of the NRRP still applies within this Zone, and therefore compliance with the rules of that Chapter, in relation to wetlands, will still be required. They raise concerns that including it as an additional standard and term under this rule sets up a potential duplication of consent processes. It is my view that this potential duplication is not efficient or effective, and therefore I consider the standard and term should be removed.

300. Water Rights Trust Inc, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 48, 113, 136 and 139) seek that part (e)(ii) be amended so that in relation to the Hurunui Catchment, the point of take is required to occur downstream of the confluence of the Hurunui River mainstem and Surveyors Stream, rather than the confluence of

the north and south branches. This is on the basis that the white water recreation values of the Maori Gully are of national significance and as such should be protected. Whitewater Canoe Club Inc and Whitewater NZ Inc, and Mr Ian Fox (Submitters 95 and 109) seek that it be amended to refer to at or about the flow recorder at Mandamus, in order to protect the nationally significant kayaking and fishing upstream.

301. I firstly note that non-compliance with the standard and term would mean an activity would become non-complying under Rule 4.2. This standard and term essentially restricts how high up in the catchment water could be taken to assist in protecting the high value areas in the upper Hurunui and upper Waiau Catchment.

302. I note that the recommendation of the special tribunal on the Water Conservation Order for the Hurunui River identified Surveyors Stream as being an important threshold area from the high value area in the upper catchment to the less valued area when the Hurunui River becomes more braided. The Hurunui Waitohi Selection Panel report also identified that there were significant benefits to the Hurunui Water Project and Direct Project Management proposal that they considered, because these proposals took water below Surveyors Stream and left Māori Gully in its current unmodified state. Based on this, it is my view that it is appropriate to amend (e) to refer to Surveyors Stream, as sought by submitters[38], as this will better implement Policy 2.7 and achieve Objective 3(g).

303. Standard and term (g) of Rule 2.3 requires that an IDP be submitted with the application. Ngāi Tahu Property Ltd (Submitter 121) considers this to be an onerous requirement for small surface water takes, and consider a threshold should be provided, which they suggest is a maximum volume of more than 200l/s. It is my view that it is not efficient to require an IDP for any take under this rule, as the rule would currently capture smaller water take applications (that are not otherwise permitted), including consent replacements that are applied for under s124 of the RMA, and water takes for non-irrigation purposes such as dairy sheds. I also note that the proposed matter for discretion (i) requires consideration of the extent to which the proposal addresses Policy 6.5. In my view allows for consideration of this matter on a case-by-case basis. As such, I agree with the submitter that a threshold should be provided for where an IDP is required, and therefore I recommend that the submission is accepted in part. However, having discussed this with Lisa MacKenzie, Environment Canterbury's Consents Planner, I consider that a lower threshold may be more appropriate, such as 100 or 150l/s, in order to capture larger farm or irrigation schemes, as well as border dyke takes, that in my view should be addressing their consistency with the wider irrigation goals of the Plan. In **Appendix 2** I have therefore recommended the lower 100l/s threshold.

304. Various submitters[39] seek that a standard and term be added to the rule to require that "*the activity in combination with all other activities shall not result in the nutrient limits in Schedule 1 being exceeded".* As with other similar

[38] Water Rights Trust Inc, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 48, 113, 136 and 139).

[39] Water Rights Trust Inc, Fish and Game New Zealand, Royal Forest and Bird Protection Society Inc and Ms Eugenie Sage (Submitters 48, 113, 136 and 139).

submission points on various rules within the Plan, it is my opinion that including this as a standard and term is not appropriate, as the "*activity*" to which this rule applies, is the taking, diverting, discharge and use of surface water. The "*activity*" to which the nutrient limits apply, however, is land use. As such, I consider that the addition of the standard is not appropriate as it does not relate to the activity to which the rule relates. Notwithstanding this, I also note that as currently proposed, the load limit in Schedule 1 would not apply under the land use rules until 2017. In my view, if this lead in period is retained (discussed in the **'Water Quality'** section of this report), there would be a tension in any applicants for consents to take and use water to meet limits that do not otherwise apply. Further, it is my view that standards and terms should be certain and measurable. While it can be estimated how land use intensification enabled through further allocation will contribute towards the load limit, given the limited understanding of how current land use practices contribute towards the limit and the annual variations in the load itself[40], I consider it is far more difficult to say with certainty that the proposed standards and term is met. In this regard, I agree with the further submission of Federated Farmers of New Zealand (Submitter 123), that the nutrient limits are best considered when exercising discretion, rather than as a condition of compliance.

305. One of the matters for discretion under Rule 2.3(ii) includes consideration of the effects of the take on water quality, including compliance with the nutrient limits. Water Rights Trust Inc and Fish and Game New Zealand (Submitters 48 and 113) also seek that this is amended to refer to "*any effects on water quality"* rather than further reference to the nutrient limits as currently worded. Ngāi Tahu Property Ltd, Federated Farmers of New Zealand and Royal Forest and Bird Society (Submitters 121, 123 and 136) seek that this assessment matter is deleted altogether. Hurunui Waiau Zone Committee (Submitter 81) also seeks that the assessment criteria not refer to the nutrient limits but to the *"values identified in objective 5.1 and 5.2 being compromised, the numerical limits described in Policy 5.1 and 5.2 being breached or noncompliance with policy 5.3",* as those provisions are sought to be amended through their submission. Ravensdown Fertiliser Co-operative Ltd and Hurunui Water Project Ltd (Submitters 102 and 127) seeks that (ii) is amended to address their concerns relating to the nutrient limits.

306. It is my view that it is appropriate to give consideration to the consequential effects of the take and subsequent use of water, or diversion and discharge, on water quality, as proposed in this matter for discretion. In particular, it is my view that this ensures integration of decision-making in relation to both water quantity and water quality. The approach allows for consent conditions to be imposed (if appropriate) in relation to addressing the cumulative effects on water quality arising from the take and use of water, and acts as a trigger for consideration of whether the take and use will lead to a land use change that needs to be considered under the land use rules of the Plan. However again, because the matter for discretion currently refers to the "*activity*", I recommend that this matter for discretion is amended, as sought by some the submitters, so that it simply refers to "*any effects on water quality".* In my view, is it not necessary for the assessment matter to extend further to refer to particular policies and objectives against which an application should, in my view, automatically be considered against.

[40] Discussed further in the **'Water Quality'** section of this report.

307. Ms Eugenie Sage (Submitter 139) seeks that activities which do not comply with the performance standards of Rule 2.3 are non-complying. It is my understanding that activities which do not comply with the standards and terms of Rule 2.3 are already non-complying under Rule 4.2, and therefore no changes are necessary.

11.14 General Submissions on Allocation Regime and Explanations

308. Mr John Talbot (Submitter 1) states that throughout Table 1, which provides the flow and allocation regime, the A Block minimum flow, A Block allocation, B Block gap size, B Block minimum flow, B Block allocation and so on, do not consistently sum, and seeks amendments to the table accordingly. I accept that there is an overlap between the B Block minimum flows and A Allocation Blocks and minimum flows in some months, for example in the Waiau Catchment prior to storage being developed. I note that this overlap will only arise prior to the specified amount of storage being developed. As such, it provides an element of future-proofing for applications granted for B Block water, which in my view is efficient and avoids potentially inconsistencies with consents in future. To address the submitter's concerns, an alternate approach would be to reduce the A Block minimum flows in the months where they are 25 m^3/s, to 20 m^3/s, but this would lessen the incentive to establish storage, and therefore in my view is less likely to achieve the Plan's objectives.

309. Direct Project Management Ltd (Submitter 120) also seeks that in the Hurunui Catchment, the B Block Gap Size is adjusted so that the A block minimum flow + A Block Allocation + Gap = B Block Minimum Flow, noting that there is currently 0.8 m^3/s missing from this equation, some of which they state has been acknowledged by ECan at ZC meetings is "misallocated" water that is currently taken from the river. In my view, it is appropriate to increase the gap size by the 0.8m^3/s to address the submitter's concerns. The amendments to Table 1 are shown in **Appendix 2**.

310. Mr B and Ms J Demeter (Submitter 125) seek that the Hurunui SH1 flow recorder be utilised to determine river flow for Domett plains abstractors and to monitor cessation of take in the Amuri reach, as in their view current proposals for water use efficiency means efficiency gains in the Amuri reach will reduce inflows and subsequent flow though the gorge resulting in potential reduced reliability of Domett abstractors by up to 50%. They also seek that the Lower Waiau flow recorder be utilised. It is my view that this should be rejected, on the basis that Dr Smith's evidence states that if irrigation efficiency was improved to 100% in the Pahau catchment, so that there was no modification to the Pahau River flows, there would have been no effect on reliability of supply for A-block abstractions from the Domett reach of the Hurunui River during the two recent irrigation seasons.

311. The '*Allocation of Water'* sub-section in part 1 of the Plan provides an explanation to the allocation blocks proposed within the HWRRP.

312. Mr John Talbot and Independent Irrigators Group (Submitters 1 and 92) note that in the second paragraph of this sub-section, it is stated that the A block comprises the existing takes. They seek that the paragraph is amended to include reference to a list of current consents, and clearly state the current

allocation from the A block. It is my view that the purpose of this part of the Plan is to provide explanation for how the planning framework is intended to address the identified issues. In my view, such specific details are not necessary for this purpose, and I also note that the information would only be correct as at the time of its inclusion. In my view it would not be efficient to include information that could quickly become out of date. As such I recommend that this is rejected.

313. Meridian Energy Ltd (Submitter 80) seeks the following amendment, in relation to the fifth paragraph of this sub-section: "*The total amount of additional B ~~and C~~ Allocation Block water provided for in this Plan, along with the ...*" The submitter considers that A and B Block water from both rivers, with sufficient storage is sufficient to meet irrigation targets of the Plan. However it is my view that ultimately this depends on the size of storage developed, and that C Block water may therefore be required to assist with meeting the full irrigation targets of the Plan. As such, reference to this, in my view, should be retained.

12. C Block Allocation

12.1 Approach

314. The **'Water Allocation'** section of this report has considered the allocation of water from within the A and B Block in the HWRRP. The approach taken to the allocation of these blocks is a traditional approach, in the sense that it is based on an analysis of the technical evidence on the expected effects of full allocation of this water, and the conclusion that on balance, such allocation (subject to appropriate mitigation measures), will implement the policies of the Plan and ultimately achieve its objectives. That technical evidence establishes that the allocation of water from within the A and B Allocation Blocks, is generally appropriate, subject to appropriate mitigation measures. The HWRRP enables consideration of the specific effects of any allocation of water from within these Blocks, as a restricted discretionary activity. This activity status provides certainty to applicants as to what matters the Council will consider, whilst still allowing the Council to decline consents where a specific proposal is not appropriate.

315. Traditionally, allocation of water beyond these limits is generally treated as a non-complying activity; therefore while applications can be made for water to be allocated beyond these limits, plans generally set a high barrier for such consenting to occur.

316. However, the approach taken to the allocation of C Block water differs from this approach. The HWRRP provides for takes within the C Block, i.e. beyond the A and B Block limits, as a discretionary, rather than a non-complying activity. In order to meet the Plan's objectives, and ultimately avoid adverse effects that might arise from allocation of this water, a strong policy framework is proposed, that any application would be assessed against. Beyond the C Block Allocation limit, water allocation is prohibited, meaning that no application can be made for the allocation of such water.

317. This approach is described in the HWRRP on page 8 (in the '*How this Plan Responds to the* Resource *Management Issues and the Hurunui Waiau Zone Implementation Programme'* section) as follows:

> *"In general the A Block comprises the existing takes, with additional demand provided for from the B and C Blocks which have been established on the mainstems of both the Hurunui and Waiau Rivers. There is a high level of confidence that the B Allocation Block is set at a size which protects instream values. The taking of B Block water is therefore managed as a restricted discretionary activity under Rule 2.3 and the Canterbury Regional Council has restricted it's discretion to a number of key factors.*
>
> *The C Block has been set at a size which allows for a range of out of stream uses however there is a risk that if the C Block is utilised to its maximum potential for out of stream use the environmental, cultural and recreational values may be compromised. Therefore any use of the C Block for out of stream use is a discretionary activity under rules 3.1 and 3.2."*

318. In short, the philosophy behind the HWRRP approach to the C Block, is to enable takes beyond the A and B Block limits, in order to enable further economic development, but not at the expense of a number of bottom line environmental, cultural and recreational outcomes (Objective 3). If these outcomes will not be met, consent is unlikely to be granted (Objective 3, parts (a) – (f) and related policies). In this regard, allocation of C Block water places the onus on the applicant, through a consenting process, to demonstrate how any proposal meets the outcomes anticipated by the Plan.

319. However, in my view, what the Plan does not anticipate, is full allocation of all C Block water, unless this can still meet the Plan's environmental, cultural and recreational outcomes. The s42A reports of the technical experts provide an analysis of the full allocation of C Block water, in relation to a number of effects the Plan seeks to address such as bird habitat, flow variability and so on. That analysis shows that such allocation is unlikely to meet a number of outcomes sought in the Plan's objectives. Therefore what the Plan does is set an absolute upper limit (through a prohibited activity status) as to what applications will even be considered, and then allows for the consideration of applications up to this absolute limit.

12.2 Relevant Plan Provisions

320. The allocation of water from the C Block is specifically provided for in Policy 3.5 which is:

> *To enable water to be taken and used from the C Allocation Block set for the mainstem of the Hurunui and Waiau rivers, as specified in the Environmental Flow and Allocation Regime in Table 1, provided the following is maintained:*
>
> *(a) water quality;*
> *(b) flow variability and in particular flows between 1.5, and 3 times the median flow that flush periphyton and turn over larger gravel boulders and reset the bed of the mainstem of the Hurunui and Waiau rivers;*
> *(c) water temperature suitable for salmonid species;*

(d) the natural braided character of the Hurunui and Waiau Rivers, including the river mouth and coastal dynamics;
(e) a flow regime in the mainstem or tributaries of the Waiau and Hurunui Rivers that maintains invertebrate food production;
(f) the reliability of supply for existing abstractors;
(g) the ability of large salmonid and eel species to traverse the river from the marine environment to upstream habitats;
(h) the ability to navigate the river by Jet Boat; and
(i) daily patterns of flow that allow existing recreational opportunities and experiences in the mainstem of the rivers, their mouths or tributaries to be maintained.

321. The proposed rules to implement this policy are Rules 3.1 and 3.2, which provide for the taking, diverting, discharge and use of water from the C Allocation Block as a discretionary activity in relation to the Waiau and Hurunui River Catchments respectively. A number of standards and terms are required to be met under each rule (these vary slightly between the two catchments). Otherwise the activity becomes non-complying under Rule 4.2 (except where the take exceeds the limit stipulated in Table 1, in which case the take becomes a prohibited activity, as discussed above, under Rule 5.2).

322. These rules, in combination with Policy 3.5, are intended to achieve the overarching objectives of the HWRRP, particularly Objective 3, which as noted earlier seeks to allocate water so as to enable further economic development, while ensuring that a number of environmental cultural and recreational outcomes are met.

12.3 Statutory Provisions

323. The provisions of the NPSFM, RPS, and PRPS that are relevant to this section of the HWRRP are outlined in the **'Water Allocation'** section of this report. However those I consider to be particularly relevant, in relation to the NPSFM are Objective B1 and Policies B1 and B5, which seek to safeguard the life-supporting capacity, ecosystem processes and indigenous species (including their associated ecosystems) of fresh water, in sustainably managing the taking, using, damming, or diverting of fresh water, through the establishment of freshwater objectives and the setting of flow regimes, and ensuring that no decision will likely result in future over-allocation.

324. The objectives and policies of the RPS that I consider particularly relevant to the C Block are the same as those in the **'Water Allocation'** section of this report, being Objective 1, Policy 1 and Policy 2.

325. Those provisions in the PRPS that I consider to be most relevant are Objective 7.2.1, Policy 7.3.4 and Policy 7.3.12. The latter in particular seeks to ensure that a precautionary approach is taken to water allocation in circumstances where the effects on fresh water bodies are unknown or uncertain.

12.4 Submissions

326. The proposed C Block Allocation is one of the matters within the HWRRP that drew a significant number of comments in submissions. Due to the number of submission points, this section of the report does not refer to all submissions points received, but considers the main issues raised at a general level.

327. The submission points on the C Block allocation generally seek:

a. That the C Block is reduced to a level where there is more certainty about the effects of takes from this Allocation Block, as the effects of taking this amount of water have not been adequately investigated;

b. That the C Block Allocation is removed altogether from the Plan;

c. That the activity status for taking of C Block water be non-complying rather than discretionary;

d. Amendments to the wording of Policy 3.5, against which applications for C Block water are to be assessed.

328. A number of submitters have raised concerns with the amount of water proposed within the C Block Allocations for both the Waiau and Hurunui Rivers, on the basis that the full environmental effects of the allocation of this water are unknown. As outlined above, it is my view that the technical evidence presented in the other s42A reports demonstrates that full allocation of the C Block may not occur, given that it is unlikely to meet the Plan's environmental, cultural and recreational outcomes. However, what the Plan provides is a framework within which applications for allocation of some or all of this water can be considered. It is my view that until information and analysis is undertaken on any specific proposal to take water within the C Allocation Block, the full environmental effects of such allocation will be unknown, and in my view, it is entirely appropriate that these are considered on a case-by-case basis.

329. In my view, what the HWRRP does, to ensure that this approach still achieves the outcomes of the Plan, is establish a strong policy framework to guide allocation of the water, so that such in-depth consideration occurs at the time of resource consent application, rather than at the time of plan-making. Such an approach places the onus on an applicant, rather than the Council to 'prove' the appropriateness of water allocation from within this block, and in my view this is an efficient and effective approach to enabling water use (above the more certain A and B Allocation Blocks), whilst sustaining the potential for the water resource to meet the needs of future generations, safeguarding its life-supporting capacity and addressing its adverse effects.

330. The alternative approach – which is to remove the C Block entirely or set a lower threshold which is more certain in terms of potential effects – would in my view not generally enable 'more water' to be allocated, and given the proposed prohibited activity status beyond the allocation blocks, would not allow for the irrigation targets in the Plan to be met (notwithstanding that they may not be able to be met because of the other outcomes sought by the Plan).

331. For completeness, I do note that there are risks associated with the proposed C Block Allocation approach in the HWRRP. In my view these are:

a. The perception that C Block allocation follows the traditional approach, and therefore that all water within this block is able to be taken; and

b. The policy framework not being strong enough to protect the values identified in the Plan.

332. In relation to (a) above, it is my understanding that investigating officers generally consider that if the amount of water sought in an application is within an allocation block, then consent would generally be granted, subject to

consent conditions to avoid or mitigate adverse effects. In my experience, it is common for discretionary activities to be referred to as being 'anticipated' by a plan in a general sense, but subject to consideration on a case-by-case basis of the appropriateness of any individual application. One way to counter this risk would be to have a higher activity status threshold (non-complying) for allocation of C Block water. As I have noted, it is however my view that a non-complying activity status is generally used for an activity that is usually not anticipated by the Plan, because it is considered unlikely to meet the plan's policy outcomes or is expected to have significant adverse effects. It is my view that this is not the case here, where some allocation of C Block water is anticipated. The unknown, in terms of whether such allocation will align with the policy outcomes or have significant adverse effects that cannot be adequately avoided, remedied or mitigated, comes down to the quantum of water that can be allocated before this occurs, and the way in which any take is managed.

333. In this regard I note that the other s42A reports consider a full (or full seasonal) allocation of C Block water, without any mitigation measures or management techniques and draw conclusions on the effects of these. Such a high level analysis is, in my experience, quite usual for a plan or plan change assessment, and assists in determining an appropriate planning framework. For example, in this instance it is my view that their analyses of the full C Block llocation provide support for the prohibited activity status beyond the proposed C Block limit.

334. What however, is not included in these analyses, (nor in my view would it be appropriate for this process) is an assessment of a particular proposal, including a lesser quantum of water than full allocation, and any mitigation measures to address potential effects of such a take. In my view, this more specific level of assessment can only be done once details of a particular proposal are known, and it is appropriate for this level of assessment to occur though a consent process for a particular application, rather than at the time the planning framework is being set.

335. Given the above, it is my view that a discretionary activity status, combined with strong policy guidance, is appropriate for the consideration of C Block takes. While I consider that there are risks associated with the perception that all water within the C Block will be allocated, it is my view that this risk is outweighed by the proposed approach providing greater opportunities for applicants, than the removal of the C Block altogether, and that this better achieves the purpose of the RMA. This is because removal of the C Block in its entirety would make the taking of this water prohibited, even though there may be proposals to take this water that are able to meet the Plan's objectives. In addition I consider that this risk can be reduced through strong guidance in the Plan's explanation, corresponding with the policies.[41] For this reason, I recommend a number of changes to the Plan's explanations around the C Block Allocation, which are shown in **Appendix 2**.

[41] This relates to a submission by Direct Project Management Ltd (Submitter 120) who seeks that the Plan acknowledge that the quantum of the C Block allocation has been arbitrarily determined at only one ZC subcommittee meeting, without supporting environmental studies as to whether or not this level of take (from the Hurunui, but also applicable to the Waiau) is sustainable. Further, they seek that the Plan acknowledges that the C Block has not been determined by any relationship with the irrigation area goal.

12.5 Policy 3.5

336. As noted above, it is my view that there are also risks associated with the proposed C Block Allocation approach in the HWRRP, if the policy framework is not strong enough to protect the values identified in the Plan. Policy 3.5 seeks to generally enable water to be taken and used from the C Allocation Block, provided that a number of listed matters are "maintained". Notwithstanding the submissions relating to the amount of water allocated within this block or the activity status for the taking and use of this water, there is general support for this policy, with submitters seeking changes to it that in their view are more appropriate to achieve the objectives of the Plan.

337. Meridian Energy Ltd (Submitter 80) seeks that the Policy should not require that the listed factors are "maintained", but rather that it should require that these factors are "achieved". This is on the basis that to maintain these factors is unachievable, and that the policy should instead allow some degree of flexibility to ensure these things can be realistically achieved, whilst enabling takes and uses, and thus achieving the Plan's objectives. Similar to this, Hurunui Water Project Ltd (Submitter 127) seeks that "maintained" be changed to "recognised or considered".

338. It is my view that requiring that the matters in Policy 3.5 be recognised or considered does not provide strong enough direction, and as such is not the most appropriate way to meet the objectives of the Plan. For example, it is difficult to see how recognising or considering the reliability of supply for existing abstractors (Policy 3.5(f)) will ensure that this is protected, as sought under Objective 3(f). In addition, and as noted above, it is my view that strong policy guidance is necessary to support the discretionary activity status for takes within the C Block Allocation.

339. I agree with Meridian Energy Ltd (Submitter 80) that if the policy is so stringent that maintaining these factors is unachievable, it will not allow for the Plan's objectives to be met. However, I note that 'maintaining' relates to preserving, supporting, sustaining, or keeping in good condition. 'Achieving', on the other hand, relates to accomplishing or gaining. Therefore in my opinion, 'maintain' relates to the current state of these factors and keeping them in good condition. For example, 'maintaining' water temperature suitable for salmonid species, does not require that there is no change in water temperature, but rather that these changes are within a range suitable for this species. Similarly, maintaining a flow regime that maintains invertebrate food production does not require that there are no changes to the flow regime. Therefore it is my view that 'maintaining' these factors is appropriate to ensure that the matters in Objective 3 are achieved.

340. The following section addresses submissions that have sought amendments to the matters identified within Policy 3.5. In general, changes are recommended where they are expected to provide greater clarity and better assist in the policy, together with Rules 3.1 and 3.2, achieving the objectives of the Plan, particularly Objective 3. Changes are also recommended as a consequence of the changes recommended to Objective 3. In my view some of these changes will also better assist in identifying the values that are to be maintained (rather than the exact current state being maintained), which in part should address the concerns of Meridian Energy Ltd and Hurunui Water Project Ltd (Submitters 80 and 127) outlined above.

341. In relation to part (a) Meridian Energy Ltd (Submitter 80) seeks that rather than referring to "*water quality*", it refers to "*water quality consistent with Objective 5.1*". While I consider that Objective 5.1 is something that any application should be assessed against, and therefore does not need to be referred to in another provision, in this instance I consider the additional wording would provide greater clarity as to what aspects of water quality should be maintained. Ngāi Tahu Property Ltd (Submitter 121) seeks that (a) refer to water quality "*suitable for the uses and values supported by affected reaches of the Waiau and Hurunui rivers*". In my view the wording sought by Meridian Energy Ltd is more appropriate for meeting the Plan's objectives.

342. In relation to part (b), Meridian Energy Ltd (Submitter 80) seeks that it refers to flow variability "*sufficient to…*" maintain the matters identified. In my view this is appropriate as it is not the flow variability in itself, but what is achieved that in my view is important to address. Ngāi Tahu Property Ltd (Submitter 121) seeks that (b) is amended to "*ensuring that flows of between 1.5 and 3 times the median flow required to scour fine material and periphyton accumulations are retained as necessary in the mainstems of the Hurunui and Waiau Rivers*." In my view, some of these changes are appropriate, but ultimately the policy should be consistent with the wording used in Objective 3. In line with the recommendations in relation to the objective, I therefore recommend part (b) is worded as follows:

> "*flow variability and in particular flows between 1.5~~,~~ and 3 times the median flow sufficient to scour and ~~that~~ flush periphyton accumulations, ~~and turn over larger~~ mobilise gravel ~~bounders~~ and ~~reset the bed of~~ trigger flow dependent life-stage processes such as fish migration in the mainstem of the Hurunui and Waiau rivers*".

343. Meridian Energy Ltd (Submitter 80) seeks that part (c) refer to water temperatures "*that avoid significant adverse effects on*" salmonid species. For reasons outlined elsewhere in this report, it is my view that reference to only significant effects is not appropriate. I further note, in relation to the wording of this part, that maintaining a "*suitable*" water temperature does not require that there is no change in water temperature, but rather than these changes are within a range suitable for these species, which in my view is appropriate. Ngāi Tahu Property Ltd (Submitter 121) seeks that part (c) is deleted because it is too ambiguous and uncertain. It is my view however that the matter is necessary to assist in achieving Objective 3, and therefore its removal is not appropriate. Department of Conservation (Submitter 90) seeks that part (c) refer to native fish and invertebrate species as well as salmon. In my view, this is generally appropriate, but wording consistent with that used in other parts of the Plan (as commented on by Ngāi Tahu Property Ltd (Submitter 121) more generally) is most appropriate, as follows:

> "*water temperature suitable for ~~salmonid~~ native fish, salmon and trout ~~species~~*"

344. The Gore Bay and Port Robinson Ratepayers Association Inc (Submitter 43) support part (d) as written. Meridian Energy Ltd (Submitter 80) seeks that "*the*" is replaced with "*a*", and in my view the change is not necessary.

345. In relation to (e), Meridian Energy Ltd (Submitter 80) seeks that "*maintains*" is replaced with "*avoids or mitigates significant adverse effects on*". For reasons set out elsewhere it is my view that referring to significant adverse effects only is not appropriate. Ngāi Tahu Property Ltd (Submitter 121) seeks that (e) is amended as follows: "*a flow regime in the mainstem or tributaries of the*

Hurunui and Waiau rivers that maintains sufficient invertebrate ~~food~~ production to support fish and bird communities". In my view, this wording is generally appropriate as it better identifies the values that are to be maintained to achieve objectives; however in my view the word "***food"*** should be retained as otherwise the wording does not make sense.

346. Federated Farmers of New Zealand (Submitter 123) seeks that (f) is extended to include: "*If the reliability of supply to existing abstractors is adversely affected, it must be restored, using C block water, at no additional cost to the existing abstractors, unless there are real benefits to them, such as ongoing* assurance *of high reliability in the face of environmental pressures to increase minimum flows*." In my view this is not appropriate as it is contrary to direction to maintain reliability of supply to existing abstractors, which the submitter also appears to support. Meridian Energy Ltd (Submitter 80) seeks that the part refers to the "*existing*" reliability of supply, and in my view this inclusion is appropriate and provides greater clarity.

347. Meridian Energy Ltd (Submitter 80) seeks that part (g) is amended to refer to "*avoidance or mitigation of significant adverse effects on*" the ability of fish to traverse the river. (Submitter 90) seeks that the part refer to "*eels, galaxiids, salmon, and those estuarine/river mouth species such as flounder, smelt, and mullet*" rather than only to large salmonid and eel species. Ngāi Tahu Property Ltd (Submitter 121) seeks that the current wording is replaced with "*fish passage for salmon and large eels*". In my view, referring to significant adverse effects only is not appropriate. In order to better implement Objective 3, I do consider that reference to native fish is appropriate, however I consider that it is most appropriate to use wording consistent with the rest of the Plan, as sought in a general submission by Ngāi Tahu Property Ltd (Submitter 121).

348. Whitewater Canoe Club Inc and Whitewater New Zealand Inc, and Mr Ian Fox (Submitters 95 and 109) seek that part (h) be amended to the ability to navigate the river by kayaks. I consider this to be appropriate, as it is consistent with recommended changes to Objective 3(g), and therefore necessary to implement that objective. Similar to their submissions on Objective 3(g), Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) seek that part (h) of this policy refer to "opportunities" to navigate the river rather than "the ability" and for the reasons set out in response to the objective I similarly recommend that these are rejected.

349. Ngāi Tahu Property Ltd (Submitter 121) seeks that part (i) is deleted, on the basis that it is not practical, and that it is inefficient for a large take to change the flow taken on a regular, short term basis. However, the submitter does not address how the removal of this clause will achieve the Plan's objectives as they relate to recreational activities and values. Meridian Energy Ltd (Submitter 80) seeks the following amendments:

> "(*i) ~~daily~~ patterns of flow that ~~allow existing~~ support recreational opportunities and experiences in the mainstem of the rivers, their mouths or tributaries ~~to be maintained~~*."

350. In my view, these changes generally provide greater clarity over what values are to be maintained, and avoid repetition with the stem of the policy. I do however recommend that the reference to "*existing*" recreational opportunities is important and should not be removed.

351. Department of Conservation (Submitter 90) seeks that an additional part is added to the policy as follows: "flushing flows capable of clearing vegetation on gravels bars/islands". In relation to this, Dr Snelder has advised me that 'flushing flows' are generally those that mobilise and transport sediment and therefore are covered in (b). Flows required to clear vegetation are however much bigger than flushing flows, and because of their size are not affected by the C Block allocation. As such, in my view the addition is unnecessary.

12.6 Rules 3.1 and 3.2

352. Rules 3.1 and 3.2 provide for the taking, diverting, discharge and use of water from the C Allocation Block as a discretionary activity in relation to the Waiau and Hurunui River Catchments respectively, and include a number of standards and terms.

353. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) seek that the standard and terms 3.1(d) and 3.2(c) are clarified to ensure it is clear that the calculation of the cumulative rate of take for all consented takes can include (without double counting) the shared allocation of water to two or more consents, provided that the second (or subsequent) allocation can only use the shared water when it is not being used by the prior allocated consent. In my view this is appropriate and I therefore recommend that the following word is added at the end of these standards and terms:

> *"and excludes 'double counting' of water allocated to two or more consents, where the shared water is not able to be used at the same time."*

354. Similar to their submission on Rule 2.3(e)(i), Whitewater Canoe Club Inc and Whitewater New Zealand Inc (Submitter 95), Mr Ian Fox (Submitter 109) seek that the point of take specified in Rule 3.2(a) is below the flow recorder near the Mandamus River, rather than below the confluence of the North and South branches. Similarly, a number of submitters[42] also seek that standard and term (a) is amended as follows, consistent with their submissions on Rule 2.3(e)(i), and that Rule 3.2(b) is consequently deleted:

> *"(a) the take occurs downstream of the confluence of ~~the North and South Branches~~ Surveyors Stream ~~of the~~ and the Hurunui River"*

355. In my opinion, the change to Surveyors Stream in Rule 3.2(a) and deletion of (b), is appropriate. Firstly, it is consistent with the changes recommended to Rule 2.3(e)(ii), and in my opinion the same reasons for that change also applies here, namely that it is more consistent with the WCO recommendation and the findings of the Hurunui Waitohi Selection Panel report and will better implement Policy 2.7 and achieve Objective 3(g). Secondly, in my view, Rule 3.2(b) is difficult to measure and as such is not appropriate as a standard and term. I note that non-compliance with (a) will mean that any water take application proposing a point to take above Surveyors Stream will become non-complying; therefore an application can be made, and how the applicant

[42] Water Rights Trust Inc, Department of Conservation, Fish and Game New Zealand, and Royal Forest and Bird Protection Society (Submitters 48, 90, 113 and 136).

may avoid, remedy or mitigate effects on recreationally important flows can still be considered through the consent process.

356. Phoebe Irrigation Ltd (Submitter 86) seeks that Rule 3.1 (b) is removed, or reworded, to allow non-consumptive discharge below the Stanton River. In my view this is not appropriate as in order to ensure that $6m^3/s$ is available for allocation downstream of the Stanton River, as per Rule 2.3(b), any non-consumptive discharge should be above this point.

357. Water Rights Trust Inc, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 48, 113 and 136) seek that the proposed standard and term for Rule 3.1 (f) and 3.2(g) which requires that "*a study has been undertaken and included with the application showing how the proposed take will affect the ecological and recreational values within the catchment to which the take occurs"* be deleted and replaced with a number of additional standards and terms that effectively repeat the provisions in Policy 3.5 to 'maintain' specified matters, for example "*jet boat passage is maintained at all times".* Fonterra Co-operative Group Ltd (Submitter 100), in a further submission, opposes the changes on the basis that they impose too onerous a standard. Department of Conservation (Submitter 90) seeks amendments to this standard and term (Rule 3.1 (f) and 3.2(g)) to require that the study is undertaken "*by suitably qualified experts*", and that it also addresses effects on natural character, and sets out how effects will be avoided, remedied or mitigated in order to maintain the values set out in Policy 3.5.

358. It is my view that standards and terms need to be measurable, given that they determine the status of an activity. As noted above, in my view 'maintaining' certain factors does not mean no change. As such, I do not agree that it is appropriate to have standards and terms that require certain values to be maintained, as determining this will require, to a certain extent, for a value judgement to be made based on an effects assessment. Rather, it is my view, and given that the proposed activity status for this activity is discretionary, that it is more appropriate for it to be demonstrated through the consent process how these factors are 'maintained', such that the proposal is consistent with the policy. The proposed standard and term (Rule 3.1(f) and 3.2(g)), in my view, is more appropriate than the changes sought by Submitters 48, 113 and 136, as it requires a study to be undertaken, which can then be assessed against the policy. I consider that the changes sought by Department of Conservation (Submitter 90) are appropriate, as they make it very clear that the purpose of the study required is to address the matters in Policy 3.5. They also ensure that the study is undertaken by a person with expertise in these matters. I therefore recommend the following wording for Rule 3.1(g) and 3.2(g):

> "*a study has been undertaken <u>(by suitably qualified experts)</u> and included with the application showing how the proposed take will affect the ecological<u>, natural character</u> and recreational values present within the catchment to which the take occurs <u>including outlining how those effects will be avoided, remedied or mitigated in order that the values outlined in Policy 3.5 a) - i) are maintained</u>."*

359. For completeness, I note that one of the standards and terms sought by these submitters in relation to water quality and the Schedule 1 load limits is similar to that sought for other rules in the Plan, and a further discussion on the appropriateness of this is contained in the **'Water Allocation'** section of this report, which in my opinion is equally relevant to this rule.

12.7 Consistency with Relevant Documents

360. It is my view that the proposed approach to C Block allocation, including Objective 3, Policy 3.5, and Rules 3.1 and 3.2, gives effect to the NPSFM, in that these provisions appropriately identify those matters that must be addressed in any application to take and use, or divert and discharge C Block water, in order to safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water (Objective B1). In addition, it is my view that the prohibited activity status beyond the C Block allocation limit is appropriate to ensure that over-allocation of the water will not arise (Policy B5).

361. In relation to the RPS, it is my view that the approach gives effect to Objective 1, in that it enables cultural, social, recreational and economic benefits to be gained from these water bodies, while safeguarding, protecting, preserving or maintaining those matters identified within the objective. Such an approach, in my view enables people and communities to maximise the wellbeing obtained from these water resources, and takes into account its value both instream and out of stream (Policy 2).

362. In relation to the PRPS, it is my opinion that the approach is an appropriate way to manage this water resource to enable people and communities to provide for their economic and social well-being through water abstraction, while identifying in-stream recreational and amenity values that need to be maintained, and matters necessary to ensure that the life-supporting capacity, ecosystem processes, and indigenous species and mauri of the fresh water is safe-guarded and natural character values are preserved (Objective 7.2.1). It is my view that the approach is also sufficiently precautionary, as while the effects of any particular take are uncertain, the Plan provides a robust framework against which to assess the effects, including cumulative effects, of any proposal (Policy 7.3.12).

13. Groundwater

13.1 Planning Framework Generally

363. The HWRRP contains a separate objective relating to groundwater, as follows:

> ***Objective 4***
>
> *Groundwater abstraction occurs in a sustainable manner preventing a long term decline in groundwater levels and surface water flows.*

364. The main provisions in the Plan proposed to achieve this objective are:

a. **Policy 4.1** which directs that no resource consent to take and use groundwater be granted if the specified annual allocation limits are exceeded, which are listed within the policy, and pertain to the Groundwater Allocation Zones shown in Map 2 of the Plan;

b. **Policy 4.2** which seeks to manage the effect of groundwater takes on surface flows, by directing how hydraulic connections will be determined;

c. **Policy 4.3 and 4.4** which seeks to manage the interference effects between bores, and maximise access to available groundwater by ensuring bores adequately penetrate the aquifer, in line with Policy WQN19 and Policy WQN14(b) of the NRRP respectively;

d. **Policy 4.5** which seeks to manage natural geothermal water to maximise community wellbeing while ensuring no long term decline in water temperature;

e. **Permitted** activity rules (6.1, 6.2, 6.3 and 6.4), subject to compliance with the specified conditions for:

   i. the taking and using of groundwater for bore development or pumping tests;

   ii. where it is less than 5 l/s and $10m^3$ per day;

   iii. for de-watering sites for carrying out excavation, construction and geotechnical testing; and

   iv. for maintaining, repairing or replacing infrastructure.

f. **Restricted discretionary** activity rules (7.1, 7.2 and 7.3), subject to compliance with the specified standards and terms for:

   i. taking diverting, using or discharging groundwater for any non-consumptive activity;

   ii. taking and using groundwater within any Groundwater Allocation Zone; and

   iii. taking and using groundwater for a community of stock drinking water supply.

g. A **non-complying** activity rule (Rule 8.1) for the taking and use of water not otherwise specified;

h. A **prohibited** activity rule (Rule 9.1) for the taking and use of groundwater that exceeds the allocation limit for the groundwater allocation zone that it is located in.

13.2 Relevant Statutory Documents

365. The NPSFM contains water quantity objectives and policies that in my view are relevant to groundwater management. These are Objectives B1, B2, B3 and C1 and Policies B1, B2, B5 and C1. Collectively, these provisions seek to safeguard the life-supporting capacity, ecosystem processes and indigenous species of fresh water, address over-allocation in water quantity and quality, and maximise efficiency, to integrate the management of the fresh water resource when setting plan provisions.

366. I also consider that Objective 1 and Policy 1 of the RPS are relevant to the management of groundwater. These direct that water allocation levels should be set which ensure those matters listed in Objective 1 are respectively safeguarded/ protected/ preserved/ maintained, or in relation to the natural character of lakes and rivers, outstanding natural features and landscapes, significant habitat of trout and salmon, and amenity values, that adverse effects are remedied or mitigated.

367. In my view, Objectives 7.2.1 and 7.2.3 and Policies 7.3.4 and 7.3.9 of the PRPS are relevant to this matter, directing that water allocation regimes should sustainably manage the water resource to enable its use, subject to the identified matters being protected or provided for, and to do so in an integrated way, including managing the hydrological connections of surface water and groundwater.

13.3 Objective 4

368. As identified in Issue 7 of the HWRRP, groundwater near a surface water body can affect the flow or level of that surface water body. Therefore the Plan proposes an integrated approach to ensure that the taking of groundwater (in combination with surface water abstractions), does not undermine achievement of the objectives of the Plan. This is reflected in Objective 4. A number of submitters[43] seek that the objective be retained.

369. Mr John Talbot (Submitter 1) seeks that the objective, the related policies and the rules to implement these, be deleted on the basis that groundwater is already comprehensively covered in the NRRP, and that as the Plan provisions also rely on some aspects of the NRRP, it is inefficient and potentially inconsistent for the HWRRP to cover these matters as well. It is my view that the Plan only relies on the provisions of the NRRP, insofar as they do not duplicate the processes set out in the NRRP for matters such as determining the degree of hydraulic connection. In my opinion it is quite clear in the NPSFM, and the PRPS that water management is to occur in an integrated way. In my view, separating out groundwater from the HWRRP would not be consistent with these higher level documents, nor would it be an effective or efficient way to achieve the Plan's objectives, as it would exclude the management of one part of the overall water resource within the zone. In my view the references to the NRRP within the policies are appropriate, in that they identify some aspects of groundwater management that can be addressed through processes or policies defined in the NRRP. It is my view that this is both efficient and appropriate, and is consistent with other policies within the Plan, for example Policy 8.1(c) relating to how application efficiency is determined.

370. Given the direction in the NPSFM, RPS and PRPS in relation to the integrated management of the water resource it is my view that the objective is appropriate, and is part of a sustainable management approach to this resource, providing for use of this resource in a way that ensures its life-supporting capacity is retained.

[43] Hurunui District Council, Ms Lesley Shand, Fish and Game New Zealand, Amuri Dairying Ltd, DairyNZ Inc, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 88, 91, 113, 129, 134, 136 and 139).

13.4 Policy 4.1

371. Policy 4.1 directs that no resource consent to take and use groundwater be granted if the specified annual allocation limits are exceeded, which are listed within the policy, and pertain to the Groundwater Allocation Zones shown in Map 2 of the Plan. This policy is supported by Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 113, 136 and 139). It is also supported by Federated Farmers of New Zealand (Submitter 123), provided that the annual volumes are soundly based on comprehensive and accurate data, as in their view the allocation amounts specified are not well understood and have not been adequately consulted on. The allocation amounts are described further in the report by Mr Poulsen, who describes how the allocation limits have been calculated for each groundwater allocation zone.

372. The approach proposed in the HWRRP, and discussed in Mr Poulsen's report, is to identify an area, referred to as the 'River Zone', where it is considered highly likely, (for the reasons set out in his report) that a groundwater take will have a direct hydraulic connection to surface water. Under Policy 4.2(b), shallow takes (less than 30m) within the River Zone will therefore be treated as having this direct connection and will be required to comply with (under Policy 4.2(c)) the Table 1 regime in the Plan, unless it can be demonstrated that there is not a direct hydraulic connection. The purpose of this River Zone is therefore to simplify the consenting process for takes within this area, because a stream depletion assessment will not be required for applications within this zone. The groundwater allocation limits proposed have then been calculated to exclude the River Zone, reducing the size of the groundwater recharge areas. Mr Poulsen considers that this provides a more realistic estimate of the available groundwater resource in each groundwater allocation zone.

373. In relation to the comments by Federated Farmers of New Zealand (Submitter 123) relating to the soundness of the calculation of annual volumes, I refer to Mr Poulsen's comments that the limits have been calculated as 15% of average annual rainfall in all areas except for the Culverden Basin, where more soils profile available water data is available and 50% of the mean annual land surface recharge has been assigned[44].

374. Hydrotrader Ltd (Submitter 72) seeks that the policy is amended to state that the allocation limits are based on the best available science, and that any applications made to take water in excess of these limits must be tested as a non-complying activity. In relation to stating within the policy that the limits are based on the best available science it is my view that this is not appropriate. While this may be the case, in my view a policy is a guiding principle used to set a direction, and the additional wording would therefore, in my view, not be a policy. The activity status matter is discussed further below.

375. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seek that the policy be deleted, on the basis that one overall catchment limit should be applied to all surface, groundwater and hydraulically-connected groundwater takes, with catchment specific allocation limits within this overall limit. It is my view that

[44] For the rationale behind this refer to Poulsen, D. & Smith, M. (2011). *Groundwater management and allocation in the Hurunui River catchment.* Environment Canterbury Report No. U11/4.

this is inappropriate, as it does not recognise the different effects that these different takes have on the matters that the Plan seeks to protect. Groundwater takes, for example, will not have the same level of effects on surface water bodies, and therefore in-stream values, as a surface water take. As such, the approach suggested by the submitter would not be as efficient and effective in meeting the objectives of the Plan.

376. Z Energy Ltd, BP Oil NZ Ltd, Mobil Oil NZ Ltd and Caltex NZ Ltd (Submitter 14) generally supports this policy as it relates to consents to take groundwater. However, they seek an additional policy be included to facilitate groundwater abstractions where these will have a less than minor effect on groundwater decline and surface water flows, to be given effect to through a permitted activity status for dewatering activities. On this basis they seek that Policy 4.1 does not apply to such activities. It is my view that this is already adequately addressed in the Plan framework without the need for an additional policy. This is because smaller or temporary groundwater takes are already provided for as permitted activities, on the basis that they will have such minimal effect that they will not compromise the outcomes sought in the Plan. That is, the identified permitted activities are expected to achieve Objective 4. This includes Rule 6.3 which provides for de-watering for excavation, construction and geotechnical testing, subject to conditions.

13.5 Policy 4.2

377. Policy 4.2 seeks to manage the effect of groundwater takes on surface flows, by directing how hydraulic connections will be determined. This policy is supported by Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 113, 136 and 139). Under Policy 4.2(c), groundwater takes identified as having a direct, high or moderate hydraulic connection (determined through the process set out in Policy 4.2(a)) are required to comply with the Table 1 regime, to the degree specified in the calculation methods of Policy WQN7 of the NRRP. Under Policy 4.2(b), takes within the River Zone and less than 30m deep are automatically considered to have a direct hydraulic connection, unless demonstrated otherwise.

378. Hurunui Water Project Ltd (Submitter 127) seeks clarity as to whether the connected groundwater takes referred to in Policy 4.2(c) have been taken into account in the setting of the allocation regime, seeking that if this has not occurred, the allocation regime should to be revised to include the relevant groundwater takes.

379. It is my view that the setting of the allocation regime for surface, groundwater and hydraulically-connected groundwater takes has taken into account the different effects that each take has on the water resource, and on the values that the Plan seeks to manage. It is my understanding that surface water takes, for example, have an immediate and full effect, whereas groundwater takes have a longer and lesser effect. Therefore, in my opinion it is appropriate that there are separate limits for surface water allocation and groundwater allocation, with hydraulically-connected groundwater counted proportionally in both, rather than the groundwater takes being included in the surface water allocation regime in totality.

380. Related to this, Mr John Talbot (Submitter 1) raises concerns that it is not clear what proportion of groundwater take is counted in the groundwater allocation limit and what proportion in the surface water block. It is my view

that Policy 4.2(c) makes it clear what proportion of a groundwater take (with a direct, high or moderate hydraulic connection) is required to comply with the Table 1 regime, and therefore be counted in the surface water block.

13.6 Policy 4.3, 4.4 and 4.5

381. These policies, seek to: manage the interference effects between bores; maximise access to available groundwater by ensuring bores adequately penetrate the aquifer; and manage natural geothermal water while ensuring no long term decline in water temperature. They are supported by Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 113, 136 and 139), with the only submission in opposition (Mr John Talbot, Submitter 1) seeking deletion of the groundwater provisions in the HWRRP in their entirety. For the reasons outlined earlier, the latter approach is not considered to be appropriate, and therefore I support retention of these policies.

13.7 Permitted Takes

382. In order to implement the groundwater policies of the Plan, a number of rules are proposed. Permitted groundwater takes are provided within proposed Rules 6.1 – 6.4 of the HWRRP. These rules are supported by Water Rights Trust Inc, Fish and Game New Zealand, Federated Farmers of New Zealand and Dairy NZ Inc (Submitters 48, 113, 123 and 134).

383. Mr John Talbot (Submitter 1) seeks their deletion on the basis that the current NRRP rules in relation to this matter should be retained. For the reasons outlined earlier, I consider this approach to be inappropriate, because it would not provide a holistic and zone-wide approach to the management of the water resource, as directed by the higher level planning documents, nor would it address the issue identified in the plan, of the effect of groundwater abstraction on surface water bodies.

384. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seeks that Rule 6.2 be re-drafted so that it is made clear whether the rates include or exclude domestic and stockwater takes, and expresses concerns that the rule only regulates the distance to property boundaries, waterways and wetlands for shallow bores, seeking that the conditions apply to all bores. It is my view that as domestic and stockwater for the reasonable needs of individuals and their animals is provided for under s14(3)(b) of the RMA, the rule does not apply to such takes, but allows for additional permitted takes. It is my view that it is not necessary to state this within the rule. In relation to the depth of bores, I note that the changes sought by the submitter are consistent with Rule WQN9 of the NRRP, which does not distinguish between bore depths. It is therefore my view that the change sought is appropriate. Similar amendments sought by the submitter to standards and terms of the restricted discretionary activity rules are also supported on the same basis and are therefore not referred to further in the following sections.

385. Ngāi Tahu Property Ltd (Submitter 121) seeks that the threshold for permitted activity takes under Rule 6.2 be increased to 40 cubic metres per day on the basis that groundwater is not highly allocated within the zone and a larger limit for activities would allow for activities such as dairy washdown without consent. In my view, it is important to remember that the rule provides for a

permitted activity limit, and therefore is anticipated to have minimal effects on the overall water resource, and effects generally that do not require greater consideration through a consent process. I note that the rate and amount proposed is the same as that proposed under condition 1 of Rule WQN9 of the NRRP. Notwithstanding that the current allocation of groundwater is low, it is still my opinion that larger takes should be considered in a consent process whereby they are required to meet the allocation limits specified in the Plan. I do not consider that the submitter has provided sufficient reasoning for this rule to have a different limit to that existing under the NRRP.

386. Z Energy Ltd, BP Oil NZ Ltd, Mobil Oil NZ Ltd and Caltex NZ Ltd (Submitter 14) supports Rule 6.3 on the basis that it provides for dewatering of sites for excavation, construction and geotechnical testing as a permitted activity. However they are concerned that non-compliance with a condition of this rule would automatically default to a non-complying activity status, because it would not fall under Rule 7.1 pertaining to takes for non-consumptive activities. It is my opinion however that should the conditions of Rule 6.3 not be met, the activity would more likely fall under Rule 7.2 which provides for the taking and using of groundwater within the identified zones as a restricted discretionary activity, subject to compliance with specified standards and terms, that in my view such an activity should be able to meet. (This is with the exception of the necessity for an Infrastructure Development Plan under (e), which in any case I recommend is removed, for the reasons discussed below).

13.8 Restricted Discretionary Activities

387. Rules 7.1, 7.2 and 7.3 provide for:

a. taking diverting, using or discharging groundwater for any non-consumptive activity;

b. taking and using groundwater within any Groundwater Allocation Zone; and

c. taking and using groundwater for a community of stock drinking water supply;

as a restricted discretionary activity, subject to compliance with specified standards and terms.

388. Rule 7.1 is supported by Water Rights Trust Inc and Federated Farmers of New Zealand (Submitters 48 and 123).

389. Water Rights Trust Inc and Fish and Game New Zealand (Submitters 48 and 113) seek that Rule 7.2 be amended to require as a standard and term that *"the activity in combination with all other activities shall not result in the nutrient limits in Schedule 1 being exceeded*". Those submitters also seek amendments to the related assessment matter (ii), consistent with their submission on other rules in the Plan. It is my view that this additional standard and term is not appropriate, for the same reasons that are discussed in relation to Rule 2.3 (refer **'Water Allocation'** section), and for simplicity are not repeated here. Again, for the same reasons as those relating to Rule 2.3, I also recommend that the relevant assessment matter (ii) under Rule 7.2 is amended to refer to "*any effects on water quality".* Related to this matter, Ngāi Tahu Property Ltd (Submitter 121) seeks that the matter for

discretion (ii) is deleted, corresponding with their submission points on other rules within the Plan. For the same reasons as stated previously, I do not consider its deletion to be appropriate to meet the Plan's objectives.

390. Ngāi Tahu Property Ltd (Submitter 121) generally supports Rule 7.2 but seeks that standard and term (e), which requires that an Infrastructure Development Plan ('**IDP**') be submitted with the application, is deleted, on the basis that it is an onerous requirement for groundwater takes, which usually service small-scale activities. They consider that such takes are not part of more wide-scale development and should not be treated as though they are. In my opinion, this requirement, for any take and use of groundwater that is not a permitted activity to supply an IDP is potentially onerous, given that such a take is unlikely to be part of wide-scale storage and development (and as noted above in relation to Z Energy Ltd, BP Oil NZ Ltd, Mobil Oil NZ Ltd and Caltex NZ Ltd (Submitter 14). However, should such a larger take be proposed, it is my view that in order to meet other objectives of the Plan in relation to integration of infrastructure, provision of an IDP might be appropriate. Therefore, and to be consistent with the changes proposed to Rule 2.3(e), it is my view that it is appropriate to apply a threshold of 100l/s, such that where the take is less than this rate, an IDP is not required. An alternate approach would be to remove (e) as a standard and term and rely on larger takes being considered against the proposed assessment matter (i), which requires consideration of the extent to which the proposal addresses Policy 6.5, and would effectively allow for consideration on a case-by-case basis.

391. The Canterbury Regional Council (Submitter 5) seeks a minor change to Rule 7.2 (c) to provide greater clarity, and I recommend that this is accepted in part, with slightly alternate wording shown in **Appendix 2** which I consider is more appropriate.

392. In relation to this, within paragraph two of the sub-section '*Groundwater'* in Part 1 of the Plan, Royal Forest and Bird Protection Society (Submitter 136) seeks the following wording amendments *"This Plan sets up a strong and enabling policy framework to allow for additional groundwater abstraction within the Hurunui and Waiau catchments while ~~at the same time managing~~ preventing ~~the long term~~ groundwater decline and associated effects on surface water flows*". It is my view that it is appropriate for the wording to be amended so as to be more consistent with Objective 4. However I consider that the following wording best achieves this:

> *"This Plan sets up a strong and enabling policy framework to allow for additional groundwater abstraction within the Hurunui and Waiau catchments while at the same time ~~managing~~ preventing ~~the~~ a long term ~~groundwater~~ decline in groundwater levels and associated effects on surface water flows*."

393. In relation to Rule 7.3, which pertains to taking and using groundwater for community and/or stock drinking water supplies, I note that a number of concerns raised by submitters relate to matters addressed in the **'Community and Stock Drinking Water'** section of this report, and on that basis are not repeated here. Similarly, deletion of the rule in its entirety as sought by Mr John Talbot (Submitter 1) is not recommended for the previously set out reasons. The rule is supported by Fish and Game New Zealand (Submitter 113).

13.9 Non-Complying and Prohibited Activities

394. Rule 8.1 is a 'catch-all' rule that specifies that any take or use of groundwater that is not otherwise specified, be considered as a non-complying activity. The rule is supported by a number of submitters.[45] Mr John Talbot (Submitter 1) seeks that this rule be deleted, as part of the relief sought that the entire groundwater section of the Plan be removed.

395. Rule 9.1 specifies the taking and using of groundwater as a prohibited activity, where the take exceeds the allocation limit specified within Policy 4.1. This rule is supported by Z Energy Ltd, BP Oil NZ Ltd, Mobil Oil NZ Ltd and Caltex NZ Ltd, Fish and Game New Zealand and Te Rūnanga o Ngāi Tahu and others (Submitters 14, 113 and 116). Again, deletion of this rule is sought by Mr John Talbot (Submitter 1), and the submitter raises concerns with the method used to calculate the allocation limits. Hydrotrader Ltd (Submitter 72) seeks that takes in excess of the allocation limits be considered as non-complying activities, rather than prohibited activities, on the basis that knowledge of groundwater limits is limited, and a non-complying activity status at least provides for consideration of a proposal.

396. I firstly note that the prohibited activity status is consistent with the proposed prohibited activity status for surface water takes. I have also considered whether a prohibited activity status is necessary to give effect to Policy B5 of the NPSFM, which directs that the council ensure that no decisions will likely result in future over-allocation.

397. I accept that while the groundwater allocation limits are based on current knowledge, there is a level of uncertainty around them. For example, soils profile available data may be able to be obtained for areas other than the Culverden Basin, and therefore allow for a limit to be calculated based on the mean annual land surface recharge, rather than the mean annual rainfall that they are currently based on.[46] I also note that Mr Poulsen recommends that should the groundwater allocation block limit be reached, a recharge study should be completed, quantifying the amount and source of any additional water available. I accept that if such a study were undertaken, through which it was determined that more water was available, a prohibited activity status would not allow for an application to be made to take such water. However, until further investigation is undertaken, I am of the view that a prohibited activity status is more appropriate to ensure that over-allocation does not occur. Should it be determined in future that an alternate limit is better, it is my opinion that this is more appropriately addressed through a Plan Change, than on an ad-hoc basis through consent applications. It is further my view that a prohibited activity status will better implement Policy 4.1.

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[45] Z Energy Ltd, BP Oil NZ Ltd, Mobil Oil NZ Ltd and Caltex NZ Ltd and Fish and Game New Zealand (Submitters 14 and 113).

[46] Refer Poulsen, D. & Smith, M. (2011). *Groundwater management and allocation in the Hurunui River catchment.* Environment Canterbury Report No. U11/4, p. 27.

14. Water Quality

14.1 Background

398. I refer to the evidence of Mr Andrew Parrish, Principal Planner - Environmental Flows, in relation to the background to and context within which the water quality provisions of the HWRRP sit.

14.2 Relevant Plan Provisions and Approach of HWRRP

399. An overview of the approach taken to water quality in the HWRRP is provided at the start of this report, in section 3.4.

400. As identified in Issue 8 of the HWRRP, further irrigation development which would allow for land use intensification, if not appropriately managed, could result in increased nutrients in the zone's water bodies that have environmental, cultural and social effects. To address this, the HWRRP seeks to manage the cumulative effects of land use on water quality. In this regard, it is noted that the Plan seeks to manage the use of land, in accordance with s9(2) of the RMA. The provisions of the NRRP (or the LWRP) as they relate to section 15 discharges will also still apply.

401. Objectives 5.1 and 5.2 are the key objectives within the HWRRP for addressing water quality outcomes sought by the planning framework, and are as follows:

> ***Objective 5.1***
>
> *Concentrations of nutrients entering the mainstems of the Hurunui, Waiau and Jed rivers are managed to:*
>
> *(a) maintain and enhance the mauri of the waterbodies;*
>
> *(b) protect naturally occurring biota including riverbed nesting birds, native fish, trout, and their associated feed supplies and habitat;*
>
> *(c) control periphyton growth that would adversely affect recreational, cultural and amenity values;*
>
> *(d) ensure aquatic species are protected from chronic nitrate toxicity effects; and,*
>
> *(e) ensure concentrations of nitrogen do not result in water being unsuitable for human consumption.*
>
> ***Objective 5.2***
>
> *Concentrations of nutrient entering tributaries to the Hurunui, Waiau and Jed rivers are managed to meet agreed community outcomes while ensuring they do not give rise to:*
>
> *(a) chronic nitrate toxicity effects on aquatic species; and,*
>
> *(b) water being unsuitable for human consumption.*

402. The main policies in the Plan that are proposed to achieve these objectives are:

a. **Policy 5.1** which seeks to take a tributary and community based approach to managing water quality and improving nutrient management practices;

b. **Policy 5.2** which seeks to ensure that land use activities in the identified Nutrient Management Area have best nutrient management practises, while allowing for a lead in period (to 2017);

c. **Policy 5.3** which requires compliance with 120% of the load limits listed in Schedule 1 until January 2017 for Dissolved Inorganic Nitrogen (DIN), and 100% of these limits for Dissolved Reactive Phosphorus (DRP) or for DIN after January 2017;

d. **Policy 5.4** which is to progressively set nutrient limits for the tributaries of the Hurunui River and at the river mouth, as well as for the Waiau River catchment.

403. In order to implement these policies and achieve the Plan's objectives, the following two methods are proposed:

a. **Land Use rules:** which allow for *existing* land uses to:

i. continue as permitted activities where the landowner/occupier implements an industry certification system, a catchment agreement, an irrigation scheme management plan, or a lifestyle block management plan (hereafter referred to as Audited Self Management programmes – ASM programmes), by January 2017 (Rule 10.1); or

ii. gain consent, as a discretionary activity (Rule 11.1); or

iii. for any *changes* in land use after 2017, resulting in an increased discharge of nitrogen or phosphorus that may enter water, as permitted activities if one of the measures outlined above is implemented and provided that the annual load limit specified in Schedule 1 is not exceeded (Rule 10.2); or

iv. if the load limit is exceeded then any land use change would be considered a discretionary activity (Rule 11.2).

b. **Water take consents:** For restricted discretionary water take consents, potential effects on water quality are also included as a matter for discretion, and where such a water take is discretionary or non-complying, such a consideration will form part of the overall assessment of the alignment of any proposal with the Plan's objectives and policies. As such, consent applications to take water would need to show how load limits in Schedule 1 would still be achieved, or how any effects on water quality could be avoided, remedied or mitigated in order to achieve the outcome sought in the objectives. This approach is also related to Objectives 2 and 3 of the HWRRP, which seek outcomes in relation to water abstraction, and identify that there is a link between the allocation of the water and its use, and the resulting effects of its use on the quality of water.

404. In considering the approach to water quality management in the HWRRP, I also note that there are methods that sit outside the regulatory framework of this Plan that can assist in addressing water quality, and that in my view should be borne in mind when considering the Plan's approach. For example, there are regulatory methods contained within the NRRP relating to point

source discharges that will continue to apply within the zone, which also seek to achieve water quality outcomes sought in the objectives of the NRRP.

405. There are also non-regulatory methods for addressing water quality that are outlined in the ZIP, such as working with land and water users, which are described in the evidence of Mr Brown. In particular, I note Mr Brown's comments that the approach in the HWRRP to water quality is part of a package approach, and it is my opinion that the Plan's provisions need to be considered within this wider context. I also note the comments of Ballindalloch Farm Ltd (Submitter 40), who state that they were highly involved in the Pahau Enhancement Group ("PEG"), and fully support these sorts of initiatives. They consider that the PEG has been and continues to be a huge success, noting that in their opinion support and education works well with farmers rather than regulation.

14.3 Statutory Provisions

406. In my view, the provisions of the NPSFM that are relevant to the water quality provisions of the HWRRP are Objectives A1 and A2 and Policies A1, A2 and A3. These seek to safeguard the life-supporting capacity, ecosystem processes and indigenous species (including their associated ecosystems) of fresh water, in sustainably managing the use and development of land, and to maintain or improve the overall quality of freshwater within a region. These obejctives are to be achieved through the setting of freshwater objectives and freshwater quality limits and can include rules requiring the adoption of the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of contaminants entering freshwater.

407. The objectives and policies of the RPS that I consider particularly relevant to water quality are Objective 3 and Policies 9 and 11. These seek to enable people to gain identified benefits from water quality while safeguarding/ protecting/ preserving or maintaining respectively, those matters identified in Objective 3, through setting water quality conditions and promoting land use practises that maintain or enhance water quality.

408. Those provisions in the PRPS that I consider to be relevant are Objectives 7.2.2, 7.2.XX and 7.2.3. These seek to ensure that water abstraction and water infrastructure development occur in parallel with maintenance or improvement of water quality, that the overall quality of freshwater within the region is maintained or improved and that freshwater is managed in an integrated way, considering the effects of land uses and intensification on water quality. These are to be achieved through Policies 7.3.6, 7.3.7, 7.3.9 and 7.3.12 which direct that minimum water quality standards for surface and groundwater are established and implemented, appropriate to each water body, that adverse effects of changes in land uses on the quality of fresh water are avoided, remedied or mitigated, and that integrated solutions are used to manage fresh water, taking a precautionary approach to intensification of land uses in circumstances where the effects of these activities on fresh water bodies, singularly or cumulatively, are unknown or uncertain.

14.4 Issues Raised in Submissions

409. Water Quality was one of the areas of the proposed HWRRP which received the greatest attention by submitters.

410. Because of the volume of submission on this topic, where a matter has been raised by a particularly large number of submitters, for simplicity individual submitter numbers are not referred to.

14.4.1 Scope of the Plan

411. Te Rūnanga o Ngāi Tahu and others (Submitter 116) opposes the approach taken in the water quality section of the HWRRP to use land use controls under s9(2) of the RMA to address the cumulative effects of land use on water quality, rather than using s15 to control the discharges to water associated with this land use. This is on the basis that if appropriate farm, sub catchment and catchment nutrient limits are set, the actual land use should only be required to meet these limits, with mechanisms in place for addressing any exceedences.

412. I note that the functions of regional councils under the RMA include the control of the use of land for the purpose of maintaining and enhancing the quality of water in water bodies (s30(1)(c)(ii)). I also note that such an approach to addressing water quality is proposed in the LWRP. It is my view that the approach taken in the Plan is appropriate for addressing the cumulative effects of land use on water quality, and that it does provide a mechanism for addressing an exceedence of a catchment load limit. In particular I note that the proposed approach in the HWRRP to require land owners or occupiers to join an ASM programme (discussed further below) provides for a collective approach to addressing water quality, rather than a more individual-focussed discharge approach. Therefore the latter approach would not, in my view, implement Policy 5.1, which seeks to take a community and tributary based approach. I also note that the proposed approach is consistent with Policy 7.3.7 of the PRPS, as it the HWRRP provisions seek to avoid, remedy or mitigate adverse effects of changes in land uses on the quality of fresh water, controlling changes in land uses to ensure water quality standards are maintained.

14.4.2 Objective 5.1

413. Objective 5.1 seeks to ensure that concentrations of nutrients entering the mainstems of the Hurunui, Waiau and Jed rivers are managed to achieve the factors identified. In essence, these factors are a narrative description of the outcomes sought by the Plan. A number of submitters support or conditionally support the objective.[47]

General submissions on Objective 5.1

414. Irrigation New Zealand Inc (Submitter 104) seeks that economic and social considerations are included in Objective 5.1. It is my opinion that such

[47] Water Rights Trust Inc, Port Robinson Informed Citizens Inc, Hurunui District Council, Fish and Game New Zealand, Te Rūnanga o Ngāi Tahu and others, and Mr Wiesen and Ms Noering (Submitters 48, 51, 88, 113, 116 and 135) support this objective. Federated Farmers of New Zealand (Submitter 123) conditionally supports the objective, on the proviso that reasonable environmental limits are established.

considerations are implicitly incorporated into the objective, and in my view, economic and social effects resulting from changes in water quality are indirect, rather than direct effects. For example, changes to water quality that result in it being unsuitable for human consumption have flow-on economic and social consequences. Therefore it is not necessary to make the amendments sought to the objective.

415. Ngāi Tahu Property Ltd (Submitter 121) seeks for Objective 5.1 to be redrafted to refer to "*nutrient concentrations in*" the mainstems, rather than "*concentrations of nutrients entering"* the mainstems, and that these are managed "as *necessary to avoid significant adverse effects on…*" In relation to "significant" adverse effects, it is my view, for reasons expanded on further elsewhere in this report that it is inappropriate for the Plan to only address those adverse effects that are significant. Further, it is my view that this would be inconsistent with Objective A2 of the NPSFM, which seeks that the overall quality of freshwater (within a region) is maintained or improved.

416. In relation to the other changes sought, the submitter argues that these changes are appropriate because it is not the concentrations of nutrients *entering* water bodies that are important but the concentration within the water body. I agree with this, noting that while the Plan contains measures relating to management of concentrations entering these water bodies, the outcome sought is ultimately that this is managed to ensure concentrations in these bodies appropriately address the matters listed in the objective.

417. Dairy NZ Inc (Submitter 134) seeks that the Objective 5.1 is reworded to place emphasis on the need to manage the catchments to avoid compromising the ability of rivers to support specific values, on the basis that in their view, the Objective should outline that nutrient management is only one contributor to the achievement of the Objective. I agree that managing nutrients in water bodies is only part of the overall management of water bodies and their values. However it is my view that this is recognised through several objectives and policies within the Plan, including the management of minimum flows and allocation blocks (Objectives 2 and 3) and the design and location of storage facilities (Objective 6). It is my view that in tandem with these other objectives it is appropriate to have an objective that addresses nutrient concentrations, as part of the overall management of the water resource within this zone.

418. I also note that outside the HWRRP, there are other management measures that can assist in addressing water quality, such as the exclusion of stock from water bodies. However, these are part of the wider function of the Council (and as outlined in the ZIP) and sit outside this RMA plan, which is limited in scope to taking, using, damming and diverting water (section 14 of the RMA), discharge of water for non-consumptive takes (section 15 of the RMA) and land use which may result in a discharge of nitrate or phosphate to water (section 9 of the RMA). It is my view that Objective 5.1 is consistent with the scope of the Plan, and does not preclude other methods beyond the nutrient management proposed in the HWRRP, being undertaken in order to address water quality. In my view, such an approach is appropriate.

419. Mr Higgins (Submitter 45) states they cannot make a submission on the objective because nutrient levels have not been set. I firstly note that the Plan does include nutrient levels for the mainstem of the Hurunui River. It is also anticipated in the Plan (under Policy 5.4, and as is discussed further below), that water quality limits will be set for the Hurunui River mouth, tributaries of

the Hurunui River and the Waiau catchment. I also note that the Plan sets out in Objective 5.1 the environmental state that is expected for not only the Hurunui River, but also the Waiau and Jed Rivers. While future load limits for these other areas will need to be incorporated by way of plan change (as indicated by Policy 5.4), such a process includes statutory consultation, and will therefore allow the submitter to make comment at the time specific levels are proposed. I also note that the approach taken by the Council in relation to the CWMS and its implementation, is a collaborative one that has allowed for greater input than that required under the RMA. Should such an approach continue, the submitter will have further opportunity to have input into future load limits than the formal statutory process alone.

420. Ngāi Tahu Property Ltd (Submitter 121) also seeks that (a) to (e) are rationalised to three factors, namely: the mauri of the waterbodies; biota, including riverbed birds, native fish, salmonid and invertebrate communities; and existing recreational uses and values of the waterbodies. In relation to this, I refer to the evidence of Mr Norton, that the factor within Objective 5.1 that is likely to be the most limiting (i.e. the most difficult to achieve) is controlling periphyton growths which adversely affect those values identified in part (c), and consequentially the habitat conditions for other biota and for mauri. It is therefore my view that by removing the reference to periphyton (and to a lesser extent the reference to toxicity effects of high nitrate concentrations) the objective will be weakened. It is my view that the effects of this will be that periphyton growth could increase, in turn impacting on recreational, cultural and amenity values. In my view, it would only be appropriate to do this, should it be determined that on balance, the economic benefits of having a lesser standard outweigh the environmental costs of doing so. In other words, if increased periphyton growth is acceptable when considering the economic benefits. This type of consideration is discussed further in the following sections.

Part (b)

421. Amuri Irrigation Company Ltd (Submitter 83) suggests that it may be more appropriate to amend part (b) of the objective to refer to significant indigenous vegetation and the habitat of significant indigenous fauna, in line with s6(c) of the RMA, which refers to protection of these things, and for a new part (ba) to refer to maintenance and enhancement of the biota not covered by (b). However I note that s7(h) also requires protection of the habitat of trout and salmon and therefore it is my view that the current wording is more appropriate than that sought by the submitter.

Part (c)

422. Ms Campbell (Submitter 118) seeks that part (c) be amended to "*reduce*" rather than "*control*" periphyton growth, where it would adversely affect not only "*recreational, cultural and amenity values*" but also to "*avoid further degradation of the waters*". It is my view that the additional wording is not necessary, as it is the effects of the degradation of water (e.g. effects on values) that the objective seeks to address. It is my view that 'controlling' periphyton growth is sufficient, as it provides an appropriate balance between maintaining current water quality and the associated in-stream values and enabling further water allocation and land use intensification.

Part (d)

423. Ms Campbell (Submitter 118) seeks that part (d) be amended to ensure that aquatic species are protected from "*increased nitrate levels*" in order to avoid chronic nitrate toxicity effects. It is my view that the additional wording is not necessary; it is the effects of the increase (i.e. chronic nitrate toxicity effects) that are sought to be managed by the objective, not the increase in itself.

Part (e)

424. Ms Shand (Submitter 91) seeks that part (e) include the young, sick and elderly. In my view water should be suitable for human consumption, regardless of age or health. Amuri Irrigation Company Ltd (Submitter 83) considers that part (e) of Objective be modified by adding "*or for abstraction and use*". While I agree that contaminants can affect water quality that in turn affects its out of stream use, it is my view that this is already addressed through requiring that the water quality is suitable for human consumption. In other words, if the water is suitable for human consumption, it follows that it will also be suitable for other out of stream uses. In addition, it is my view that what constitutes suitability for drinking purposes is well-defined, whereas it is difficult to know what concentrations would be considered suitable for abstraction and use other than for a drinking water supply.

425. Hurunui District Council (Submitter 88), while supporting Objective 5.1 generally, seeks that part (e) apply only to the Hurunui and Waiau Mainstems, on the basis that these are the rivers that provide water for human consumption. Ravensdown Fertiliser Co-operative Group Ltd (Submitter 102) seeks that part (e) be deleted as community drinking water is already managed under other provisions in the Plan and because drinking water supplies are not taken from the length of the Hurunui River.

426. I note however that Objective 1 and Policies 1.1 to 1.6, which relate to drinking water supplies, do not manage the quality of water. In my opinion this is appropriate because these provisions relate to allocation of water for such uses. I also note that a future applicant for drinking or stock water or an existing drinking water provider has very limited control as to the quality of water that is available at the source, and that the HWRRP seeks to address land use activities that can affect the quality of the water source. In my view it is therefore important that the HWRRP includes provisions for ensuring that nutrient concentrations remain at an acceptable level in relation to suitability for human consumption. In my view, this is required under the National Environmental Standards for Sources of Human Drinking Water (NESSHDW).

427. In my opinion the most appropriate place for drinking water quality to be addressed is in Objectives 5.1 and Objective 5.2. I also note that while drinking water supplies are taken from different locations, any effects on the water quality above a point of take (including from tributaries entering the mainstem) can affect water quality at that point of take, and therefore in my view it is appropriate that the objective address effects on drinking water quality in a general sense. Again, I consider this consistent with the requirements of the NESSHDW which seeks to regulate activities upstream of any abstraction point for drinking water. I also note the requirement under part (a) of Objective 3 of the RPS, to safeguard the existing value of water bodies for efficiently providing sources of drinking water for people.

14.4.3 Objective 5.2

428. Objective 5.2 seeks to ensure that concentrations of nutrients entering the tributaries of the Hurunui, Waiau and Jed rivers are managed to meet "*agreed community outcomes",* ensuring that they achieve the factors identified. These factors are less stringent than those specified in Objective 5.1 for the mainstems of these rivers. A number of submitters support the retention of this Objective or conditionally support this Objective.[48]

429. Water Rights Trust Inc (Submitter 48) seeks that the phrase "*agreed community outcomes*" be removed, and replaced with "*nutrient limits that will be progressively set…*" This is on the basis that as Policy 5.4 indicates that nutrient limits will be set for tributaries, the objective should refer to these. Similarly, Amuri Irrigation Company Ltd, Fonterra Co-operative Group Ltd (Wellington) and Dairy NZ Inc (Submitters 83, 100 and 134), while supporting nutrient concentrations being managed to meet "*agreed community outcomes*", consider more detail is required around how such outcomes are to be determined. In relation to part (a) of the objective, Dairy NZ Inc (Submitter 134) considers that until the community outcomes are known, and on the basis that these will vary depending on the values associated with each tributary, it is inappropriate to include a blanket limit on toxicity concentrations.

430. I note that as currently drafted, any new limits for nutrient loads or concentrations within the HWRRP will have to be introduced by way of a Plan Change, with such limits being tested through the statutory process (this is referred to in Policy 5.4). This will include the determination of whether the limits are the most efficient and effective to achieve the objectives of the Plan, as set through this current process. It is my view that Objective 5.2 signals that tributaries have differing significance to the community than the mainstems of the rivers. I also consider, as noted by Dairy NZ Inc (Submitter 134), that some tributaries will have a higher level of importance to the community than others. In my view, the reference to "*agreed community outcomes*" reflects this. Therefore I do not consider it appropriate for this phrase to be removed, as in setting any future limits it is made clear that limits for different tributaries may differ depending on determination of their values. However, I note that parts (a) and (b) of the Objective set bottom lines that must be met, which in my view are necessary to ensure that the life-supporting capacity of the water is safeguarded, and its potential to meet drinking water needs, a first order priority, is sustained. Further, it is my view that it is not necessary to define "*agreed community outcomes*", because in effect, such outcomes will be determined through the process to set these limits.

431. Hurunui Waiau Zone Committee (Submitter 81) seeks that part (a) of the objective refer only to "*sensitive"* aquatic species. It is my view that such an amendment is not necessary, as species sensitive to nitrate are likely to be affected first by increases in nutrient concentrations, and as Objective 5.2 currently covers all species it therefore covers "*sensitive*" species.

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[48] Port Robinson Informed Citizens Inc, Hurunui District Council, Ms Shand, Fish and Game New Zealand, Te Rūnanga o Ngāi Tahu and others, and Mr Wiesen and Ms Noering (Submitters 51, 88, 91, 113, 116 and 135) support the retention of this Objective. Federated Farmers of New Zealand (Submitter 123) conditionally supports the objective, on the proviso that reasonable environmental limits are established.

432. Ravensdown Fertiliser Co-operative Ltd (Submitter 102) seeks that part (b) of the Objective is deleted, on the basis that community drinking water is already managed under other provisions in the Plan and because drinking water supplies are not taken from the length of the Hurunui River. Dairy NZ Inc (Submitter 134) also seeks deletion of part (b) of the Objective. This matter has been discussed under Objective 5.1 above, and it is my view that it is also appropriate for the suitability of water for human consumption to be addressed in the management of water quality in the tributaries. In my view removal of this value could also thwart the achievement of Objective 1 of the HWRRP, which seeks to ensure that there is access to high quality and reliable supplies of human (and stock) drinking water. This is consistent with the ZIP, and in my view also recognises the first order priority of community drinking water within the CWMS.

433. Amuri Irrigation Company Ltd (Submitter 83) seeks that part (b) of Objective 5.2 be modified by adding "*or for abstraction and use*". As with their submission point relating to part (e) of Objective 5.1, it is my view that this is not necessary, as whether the water is suitable for human consumption, which in my view is a higher test, is already addressed.

434. Overall, it is my view that Objective 5.1 and Objective 5.2 are generally appropriate to achieve the purpose of the RMA, in that they seek to manage the use and development of land and the effects this use can have on the water resource. This takes into account the benefits such development can have for individuals and the wider community, balanced with the need to ensure that the water's life-supporting capacity is safeguarded, and that the adverse effects of such land use and development on water quality are avoided, remedied or mitigated. It is also my view that they give effect to the NPSFM, because as directed by Policy A1, they are objectives for freshwater, that will assist in ensuring that the quality of the freshwater within the Canterbury region is maintained. Similarly it is my view that they implement Policy 7.3.6 of the PRPS.

435. However, as discussed further below, it is my view that the specific wording of the objectives requires a value judgement to be made in terms of the balancing required between what is necessary to appropriately safeguard the life-supporting capacity of, and avoid, remedy or mitigate the adverse effects of intensified land use on, the water resource, while enabling the use of this resource so that the Waiau-Hurunui zone community are sufficiently able to provide for their wellbeing.

14.4.4 New Objectives

436. Amuri Irrigation Company Ltd (Submitter 83) seeks that a new objective be included in the Plan as follows:

> "*In promoting the development of economically irrigable land in the Hurunui, Waiau, and Jed River catchments, all new land uses shall assess and appropriately address the cumulative effects of land use on water quality of these catchments".*

437. It is my view that this objective is not necessary to achieve the purpose of the RMA, or to give effect to the NPSFM. I also note that there is direction in the PRPS in relation to this matter. Firstly, it is my view that the wording proposed is not written as an objective, in that it does not describe the end state of the resource or the environmental value being sought, but rather states a course

of action to be taken that is more appropriate for a policy. Secondly, it is my view that the objectives of the HWRRP already appropriately address the outcomes sought in relation to water quality, and that it is not efficient or effective to include another objective that also addresses this matter.

14.5 Approach to Managing Water Quality (Policy and Rule Framework)

438. The HWRRP contains a number of measures proposed to achieve its water quality objectives. Because there are a number of submissions that seek significant changes to the water quality specific sections of the Plan to address a number of issues, the following sections of this report discuss the policy and rule framework in more general terms, rather than by provision.

14.5.1 Load Limits

439. In order to achieve the Plan's objectives, load limits for Dissolved Inorganic Nitrogen (DIN) and Dissolved Reactive Phosphorus (DRP) are proposed in Schedule 1. Under the Plan, limits are currently only proposed for the Hurunui Catchment, while Policy 5.4 signals that limits will be progressively set for other water bodies, (and as discussed further later in this report). Therefore, the Plan proposes to manage nutrient concentrations and their effects on in-stream values, through setting specific load limits. This is reflected in Policy 5.3, which states:

> *To protect existing values, uses and the mauri of the Hurunui River and its tributaries while also providing for future development in the catchment by ensuring the annual nutrient loads (as set out in Schedule 1) at the:*
>
> *(a) Mandamus flow recorder, for both Dissolved Inorganic Nitrogen and Dissolved Reactive Phosphorous, are maintained at 2005 – 2010 levels.*
>
> *(b) State Highway 1 flow recorder:*
>
> *(i) dissolved Reactive Phosphorous, is maintained at 2005 – 2010 levels;*
>
> *(ii) dissolved Inorganic Nitrogen prior to 2017, does not increase more than 20% above 2005 – 2010 levels; and*
>
> *(iii) dissolved Inorganic Nitrogen post 2017, is improved to 2005 – 2010 levels.*

440. It is my understanding that the "load" of nitrogen or phosphate is a function of the concentration of the nutrient in the river, and the flow of the river (refer to evidence of Mr Norton). It is therefore my understanding that the nutrient loads can vary on an annual basis, not only due to the concentration of nutrients entering the river but also due to the flow in any given year.

441. Hurunui District Council (Submitter 88) seeks that load limits are replaced by concentrations limits, as they consider that this would be a more effects-based approach, focussing on the effects of nutrients on water quality and in-river values. Similarly, Irrigation New Zealand Inc (Submitter 104) considers that it would be more appropriate for the HWRRP to have water quality objectives based on concentrations of nutrients rather than loads, on the basis that where the control of algal growth is the management goal, nutrient concentrations are important because such algae responds to water quality

conditions and because concentrations are simpler and less expensive to measure.

442. Ngāi Tahu Property Ltd (Submitter 121) also considers that it is the concentration of phosphorus during summer months rather than an annual load that should be addressed in the HWRRP. Or alternatively, that Policy 5.3 should be deleted entirely, with significant adverse effects managed by promoting "good *best practise land management use in the catchment"*. Related to this, they seek deletion of Schedule 1, or its replacement with a requirement relating to phosphorus concentrations between January and April.

443. Hurunui Water Project Ltd (Submitter 127) seeks that Policy 5.3 is amended so that the only limit is that concentrations of nitrate nitrogen do not exceed a 95% level of protection. Independent Irrigators Group (Submitter 92) has concerns that using a historic average annual loading will include all contributions of nutrient, such as those resulting from erosion during floods, rather than reflecting the concentration of nutrients from land use alone.

444. A number of submitters[49] also seek that the Plan's water quality policies refer to in-stream concentrations and periphyton cover measures, that they consider are required to meet Objective 5.1, rather than referring to load limits as currently referred to in Policy 5.3. These submitters however, seek to retain the load limit in Schedule 1, with this limit continuing to be used as a trigger point for the activity status pertaining to changes of land use under Rule 10.2. They consider that the deletion of Policy 5.3, and replacement with two new policies will clarify the actual environmental outcomes that are sought to be achieved in Objectives 5.1 and 5.2. Similarly, Te Rūnanga o Ngāi Tahu and others (Submitter 116) seeks that the Plan's water quality policies be redrafted to more clearly set out what is to be achieved by the nutrient limits. Ravensdown Fertiliser Co-operative Ltd (Submitter 102) seeks modifications to Policy 5.3 and Schedule 1 to refer to nuisance periphyton rather than a load limit. This would have the effect of using periphyton cover as the trigger for resource consent. What such limits would be and how they would be measured to determine compliance are however not suggested.

445. In relation to nutrient load limits, I refer to the evidence of Mr Norton that such limits can be a useful tool and part of the solution for tackling cumulative effects of non-point source pollution, and that they allow for analysis to be undertaken to estimate the capacity for resource use at the catchment scale, predict how capacity changes under different flow regimes, and what amount of land use intensification can take up that capacity. Mr Norton notes that such analysis would not be possible using just in-river concentrations of nutrients and periphyton biomass or river-bed cover measures as sought by various submitters.

446. However, Mr Norton also raises concerns with the load limit approach, on the basis that:

    a. Catchment load limits are focused on a wide area, without converting those limits to a farm level that is meaningful for individual landowners.

[49] Hurunui Waiau Zone Ltd, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 81, 113, 136 and 139).

b. Due to the variability of measured annual nutrient loads, meaningful trends in loads can only be seen over a longer time period, making them a poor basis for a trigger mechanism.

c. Where the annual load estimate will exceed the Schedule 1 limit, all land use changes would become discretionary activities, requiring the consent process to resolve the cumulative effects of multiple applications.

d. The trigger mechanism is subject to a lag time for land use change effects, which is estimated to be around seven years, and as such, land use changes may be permitted for years before the effect is picked up by the current HWRRP rules.

e. The load limits set in Schedule 1 would need to be recalculated for scenarios where further water is taken than currently.

447. Related to this, I also note Independent Irrigators Group's (Submitter 92) concerns with the lag time associated with assessing the cumulative effects of land use change on the load limits, and note this is consistent with Mr Norton's comments that there may be an average 7 year lag time. Further the submitter's comments (and similar comments of Federated Farmers of New Zealand (Submitter 123)) on the link between on-farm management and the correlation between this and the load limit within the river not being clear, are also reflected in the comments of Mr Norton that are outlined above.

448. In relation to this, Hawkins Consulting Ltd (Submitter 96) seeks that Policy 5.3 (and associated rules) contain provisions to review nutrient load limits as more technical information becomes available and community understanding improves. The submitter considers that with further understanding, load limits may prove not to be the best way of managing adverse effects on water quality. At a general level, I agree with the submitter that as information and understanding improves, changes may be required to the HWRRP, and that the RMA provides for such a process through a Plan Change. Where an alternative method is proposed, it will need to be demonstrated that the alternative method is the more efficient and effective, when considering its costs and benefits, than the methods set through the adoption of the HWRRP itself.

449. Similarly, it is my view that community values do not remain static over time, and in future the community may accept greater impacts on environmental values for greater potential economic gain or alternatively seek improvements in water quality because an instream value is being adversely affected to an extent not considered acceptable to the community. It is therefore my view that what is sought by the submitter is provided for by the plan change process under the RMA, and that there is nothing in the HWRRP that compromises such changes being considered as information and understanding improves. In my view, the question of most relevance to the Hearings Panel, is whether there is sufficient information and understanding at this point in time to determine that an alternate approach to load limits is more appropriate to achieve the Plan's objectives.

450. In his evidence, Mr Norton identifies that the regional approach developed by the CRC through the LWRP, involves an allocation mechanism for nutrient discharge allowances (NDAs) at the farm or enterprise level. As he identifies, the timing of the drafting of the LWRP and that of the HWRRP was such that the latter was drafted before the information necessary to define and allocate

NDAs was produced. I note that his recommendation is that ultimately the proposed load limits for the Hurunui River should be converted to limits that apply at the farm and allocated amongst users in the catchment using a budgeting system based on NDAs or a similar mechanism. As he recognises however, the process to identify appropriate allocations is unlikely to be sufficiently progressed to be included at this stage for the HWRRP. It is also my understanding that the proposed LWRP, while establishing a framework for an NDA approach, does not at this time establish specific limits; rather it provides a framework within which these limits, once identified, will be added and which will be applicable after 1 July 2017. **Appendix 5** contains an excerpt from the proposed LWRP in this regard. I also note that Mr Brown states that in his view, if there is anything lacking in the proposed HWRRP approach, it is the lack of an on-farm nutrient allowance and a mechanism to enforce these allowances.

451. As with my comments above, I agree that as more information becomes available, changing the approach in the HWRRP may be appropriate, and that this would be tested through the analysis required for a Plan Change. In particular, and as noted in the evidence of Mr Parrish, this is the first regional plan in Canterbury to propose the use of load limits to manage the cumulative effects of land use on water quality, and as it is implemented, it may be identified that the approach needs modification to better address these cumulative effects.

452. Overall, and based on the evidence of Mr Norton, it is my view that there are difficulties associated with both the use of a load limit and the use of nutrient concentrations and periphyton biomass limits, in terms of the effectiveness of these approaches for meeting the Plan's objectives. Notwithstanding this, while an alternative approach such as the use of NDAs may prove more appropriate in the longer term, I consider that it is not the most efficient or effective method at this time. This is because, as identified by Mr Norton, and outlined above, the process of converting load limits to limits at the point of export from the root zone, and of allocating these limits amongst users is not simple, and in my view it would be inefficient to hold up this Plan process to allow further time for these to be developed. In the LWRP, while it is anticipated that such limits will be established, they are not yet identified.

453. Providing for an NDA approach also relies on an assumption that once further work on these is undertaken, the outcome will be more appropriate (i.e. more efficient and more effective) than either of the other approaches. In my view however, there is an inherent risk in determining this before that work is actually completed, particularly as knowledge of the costs and benefits of such an approach are limited. I further note that introducing an on-farm NDA is not something that has been subject to the same level of consultation as the current load limits have. I do however consider that the concept of an on-farm benchmark or allowance may be something that is appropriate to consider as part of an ASM programme, and this is reflected in the recommended amendments to Schedule 2, discussed later in this section of the report.

454. Further, it is my opinion that an NDA approach has a much more individual focus, than the collective approach proposed in the HWRRP (and the ZIP). This is because the land use provisions in the HWRRP require that rural land owners and occupiers join and implement one of the specified ASM programmes. This allows for parties to:

a. be part of a catchment-wide programme (Catchment Agreement); or

b. for a particular industry to establish an ASM programme for members of a particular industry class (an Industry Certification System); or

c. for an irrigation scheme to establish an ASM programme for those within its command area (Irrigation Scheme Management Plan).

455. The final ASM programme specified - a Lifestyle Block Management Plan - does, in my view, takes a more individual approach, but pertains only to a particular kind of rural land use. Because of the generally collective approach proposed with the ASM programmes, my concern is therefore that an NDA or other more individual-based approach would detract from this collective focus, and would not implement Policy 5.1, which seeks to take a tributary and community based approach to managing water quality and improving nutrient management practises. Further, the collective ASM approach directly implements Policy 5.2, which seeks to ensure that land use activities have best nutrient management practises in place by 2017. I also consider that the approach is consistent with Objective 7.2.3 of the PRPS, as it provides for fresh water within the zone to be sustainably managed in an integrated way, between activities, agencies and people.

456. On the basis of the above, it is my view that notwithstanding the limitations of using either a load limit or a nutrient concentration and periphyton biomass limit, there is not currently sufficient information known about alternate approaches that could be more appropriate for meeting the Plan's objectives. As such, it is necessary to determine which of these two approaches is more appropriate at this point in time, based on the information currently available.

457. In his evidence, Mr Norton argues that in the long term a farm or enterprise level allocation would be more effective for addressing the cumulative effects of land use change on water quality, and therefore this should be signalled in an appropriate way at this stage of the HWRRP process. In his view, this requires defining clear in-river outcomes sought, and in his view, the changes sought by Hurunui Waiau Zone Committee, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 81, 113, 136 and 139) to include new policies (numbered 5.1 and 5.2 in their submissions) would increase the clarity of the outcomes sought, both in terms of in-river periphyton and nitrate concentrations to stay within toxicity criteria.

458. I acknowledge that there are inefficiencies associated with an overall load limit that is not allocated in a meaningful way at the land owner level, in that it will be left to the consent process to handle multiple applications for discretionary activities (under Rule 11.2) when, almost inevitably in time, the annual monitored nutrient loads exceed the Schedule 1 limits. One way which I consider that this risk can be minimised, is to amend the definition of "*nitrogen and phosphate load",* as sought by Hurunui Waiau Zone Committee (Submitter 81), to refer to a rolling average, rather than the most recent annual measurement. This is also similar to Mr Higgins' (Submitter 45) request for nutrient loading to be based on a four year rolling average. That way, under Rule 10.2(a), consent would only be required where the rolling average exceeded the Schedule 1 load limits, rather than the load in any particular year. The advantages of the rolling average approach are also discussed in the evidence of Mr Norton. Given that annual loads can vary significantly, dependent on not only nutrients but also flows, it is my view that such an amendment is appropriate. This is because requiring consents to be obtained for any land use change following a year with a higher load would be

inefficient, and given the purpose of the load limit is to address cumulative effects, in my opinion it is only where the average increases, that further management is required in order to address these cumulative effects.

459. Further, I consider that the current approach of referencing the load limits in Policy 5.3 is inefficient and ineffective in that it creates a circular framework. This is because where an application for land use change is made as a discretionary activity because the load limit is exceeded, under the current Plan framework consideration would need to be given to whether or not the load limit is exceeded when considered against Policy 5.3. Therefore, to be consistent with the policy, an applicant would have to demonstrate how they were going to ensure that the load limit would not be breached. This would be difficult given it is the exceedance that triggers the requirement for consent in the first place. It is also my view that to demonstrate compliance with the load limit would likely require reliance on mitigation taken by other parties to reduce nutrients, and in my view this is not efficient or effective. In addition, it is innapropriate to place reliance on actions of other parties. While I consider that a consent could still be issued, even if an application was inconsistent with the policy, following the balancing and weighing of all other relevant factors, it is my view that gaining approval could be difficult. In my view it would be inefficient to create a Plan framework that would allow for this.

460. Overall, in my view, the approach sought by Hurunui Waiau Zone Committee, Fish and Game New Zealand and Royal Forest and Bird Protection Society[50] (Submitters 81, 113, 136) generally is more appropriate because it provides for the overall load limit to be used to determine activity status, while providing, in my opinion, more appropriate direction at the policy level as to how water quality is to be managed to achieve what is sought in the objectives. In particular, it is my view that Policies 5.1 and 5.2 proposed by those submitters provide clearer direction than the current Policy 5.3, on how the objectives are to be achieved, and as such are a more effective approach. These proposed policies, recommended for inclusion are:

> *To manage water quality in the mainstem of the Hurunui River to ensure that:*
>
> *(a) Periphyton biomass of the mainstem of the lower Hurunui River (below Pahau R confluence) does not exceed 120 mg/m^2 and 20% cover of filamentous algae in 4 years out of 5 years.*
>
> *(b) Nitrate nitrogen concentration does not exceed the chronic nitrate toxicity threshold for 99% level of protection (1.0 mg N/L)*
>
> *(c) Average annual dissolved reactive phosphorus concentration does not exceed the current annual average (0.0044mg P/L)*
>
> *To manage water quality in the Pahau River, Waitohi River, Dry Stream and Waikari River tributaries of the Hurunui River to ensure that:*
>
> *(a) Periphyton biomass of the Pahau and Waitohi rivers should not exceed 200 mg/m^2 and 30% cover of filamentous algae in 4 years out of 5 years.*

[50] I note that Ms Sage (Submitter 139) also seeks very similar changes, but seeks slightly different wording.

(b) Annual average nitrate nitrogen concentrations do not exceed the chronic nitrate toxicity threshold for 95% level of protection (1.7 mg N/L) and does not exceed the chronic 90% level of protection threshold (2.4 mg N/L) at any time.

461. For completeness, in my view, using the load limit as a trigger point in the long term is unlikely to be the most appropriate approach. In particular I note that should the load limit be breached because a high load in one year (resulting in the rolling average exceeding the current average), consent would then be required for any land use changes after that point. However a lower limit in the year following might reduce the rolling average to below Schedule 1, meaning land use changes after that point would then not need consent. However, until further information is known and understanding increases about alternate limits such as NDAs, it provides the best mechanism, in combination with other provisions in the Plan, such as considering water quality effects resulting from water allocation, to work towards achieving the Plan's objectives in the short term.

462. Also related to the load limit, Federated Farmers of New Zealand (Submitter 123) make a number of comments in their submission seeking that the need for nutrient limits is clearly demonstrated and that the limits are reasonable and can be met in a cost-effective manner. Further, they consider that the limits must directly address water quality issues for the particular water body and be set taking into account the social and economic values attached to the particular water resources. It is my view that the need for the limits is clearly demonstrated, and includes the requirement under the NPSFM to set water quality objectives. I also consider the limits proposed to be reasonable, when taking into account all factors, including consideration of all costs and benefits, including social and economic values.

463. I also note that there will be other additional mitigation measures that are not directly addressed in the Plan, but which could also assist in addressing water quality. For example, periphyton and aquatic plant growth can also be managed through increased river shading which reduces light reaching the water body, and that as outlined by Dr Snelder, the frequency of flushing flows and the duration of low flows are also contributing factors in the accumulation of periphyton. Such matters will not be accounted for with a load limit or concentration of nutrients in the water body. However these measures can assist in achieving the Plan's objectives and policies.

14.5.2 Nitrate, Phosphate and Periphyton

464. The Nutrient Load Limits proposed in Schedule 1 include a limit for DIN and DRP in the Hurunui catchment. Fonterra Co-operative Group Ltd (Wellington) and Dairy NZ Inc (Submitters 100 and 134) support managing phosphorus concentrations alone, rather than having load limits also applying to nitrogen. This is on the basis that they consider focus on phosphorus management is sufficient to address periphyton growth, while allowing for further irrigated land development that is likely to be limited by a nitrogen load limit. In other words, they consider that managing phosphorus will better achieve the development goals of the Plan while still achieving its environmental outcomes.

465. Similarly, Ngāi Tahu Property Ltd (Submitter 121) considers that the proposed approach is neither efficient nor effective, on the basis that phosphorus is the most important nutrient contributing to periphyton accumulation, and that the

critical accumulations of periphyton occur during summer months. As such, they seek that the Plan targets phosphorus concentrations during summer months. Federated Farmers of New Zealand (Submitter 123) also opposes the proposed nutrient load limits, seeking deletion of Schedule 1, on the basis that the limits threaten economic viability and do not relate to the values sought to be protected. They consider this particularly so for nitrogen, with the limit being substantially more stringent than needed to achieve water quality objectives, because N concentrations are below those thought to be eco-toxic, with P being the nutrient most-affecting periphyton accumulation.

466. I refer to the evidence of Mr Norton who considers that managing a single nutrient is a risky strategy for three reasons:

a. The limiting nutrient at a given location can change at daily, seasonal or multiple year timescales;

b. Simultaneous limitation by both nutrients (i.e. co-limitation) can occur; and

c. Algae in upstream and downstream reaches of the same river, tributaries and estuaries (e.g. Hapua) may be limited by different nutrients.

467. I am also very cognisant of the comments of Mr Norton that "*the recently documented consensus amongst several leading New Zealand experts on this topic is that managing both nutrients is generally the least risky and usually most appropriate strategy*."

468. However, I also agree with the comments by Mr Norton, that while the available science does not support single nutrient management in general, there are other factors that need to be weighed in the decision-making consideration, such as the costs associated with mitigation measures to control nitrogen (as referred to by Federated Farmers of New Zealand (Submitter 123)), and that a value judgement is required in relation to weighing these economic costs, against the costs associated with potential risk to ecology, amenity and recreation values of the water bodies within the catchment.

469. Overall, it is therefore my view that it is more appropriate to manage both nitrogen and phosphorus concentrations in the HWRRP, than to manage phosphorus alone, unless it can be sufficiently demonstrated that on balance, the costs of this approach outweigh its benefits. I note that this is also discussed further below in relation to the activity status of rules.

470. Related to this matter, are the concerns of Canterbury District Health Board, Community and Public Health (Submitter 101) that other factors affecting water quality are not covered under Policy 5.3, such as bacteria, protozoa and cyanobacterial algal blooms, which they consider can have a huge impact on drinking and recreational water quality. While I agree that those are also important factors affecting water quality, it is my view that many of these factors are addressed at least in part by other regional rules in the NRRP and the LWRP which manage stock effluent and access to waterways, and are therefore outside the scope of the HWRRP. I have also been advised by Mr Norton that while the HWRRP does not set load limits for microorganisms or cyanobacteria, the setting of load limits for N and P is likely to bring benefits for microbes and cyanobacteria as well. This is because the land use methods that minimise nutrient losses from land also generally minimise loss

of other contaminants. On that basis I do not consider that Policy 5.3 needs to be amended to include these matters.

471. Canterbury District Health Board, Community and Public Health (Submitter 101) seeks that the HWRRP consider the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, which provide methods and guidance for setting limits on pollutant concentrations in fresh water, and identify triggers to prevent further water degradation. Mr Norton has advised me that the philosophy and approach of these guidelines has been a part of the Council's approach to setting limits for nutrients, and in his view is reflected in the objectives, policies and limits in rules contained in the HWRRP. Therefore I do not consider that the Policy requires any amendment in response to this submission.

472. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seeks that at a policy level, flexibility is maintained to include additional contaminants over time, as understanding increases on how contaminants other than nitrogen and phosphorus contribute to water quality. Again, it is my view that the Plan does not preclude this being considered in the future, as information and understanding increase, but that such changes would need to be considered through a Plan Change process.

14.5.3 20% increase in Nitrogen

473. A substantial number of submissions to the HWRRP on water quality relate to the proposal under part (b)(ii) of Policy 5.3 to ensure that Nitrogen levels do not increase more than 20% above the 2005 - 2010 levels, prior to 2017. Under part (b)(iii), after 2017, nitrogen levels are to be improved to the 2005 - 2010 levels, as reflected in Rule 10.2.

474. A large number of submitters have requested that the proposed 20% increase in nitrogen levels is removed, or more generally sought that there be no increase in DIN levels in the Hurunui River, with the current water quality maintained or improved. Some submitters have also sought that these levels are further reduced over time.

475. On the other hand, Irrigation New Zealand Inc, New Zealand Pork Industry Board and Federated Farmers of New Zealand (Submitters 104, 112 and 123) support the increase in N from 2005-2010 levels, with submitter 134 seeking that the nitrogen limit is further relaxed. Ms Campbell (Submitter 118) seeks that the increase in nitrogen be limited to 5% until 2017.

476. Ms Campbell, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 81, 113, 136 and 139), while also seeking changes to Policy 5.3 that would remove the proposed 20% increase at the policy level, seek changes to the rules such that where the load limit in Schedule 1 is exceeded, any changes in land use resulting in increased nitrogen or phosphorus discharges are a discretionary activity, if the load is less than 125% of that in Schedule 1 for nitrogen, or 110% for that of phosphorus. Where the load is more than 125% or 110% respectively, the activity would then default to non-complying under a new rule. Related to the discussion in the previous section, the lower threshold for phosphorus is sought on the basis that phosphorus is the limiting nutrient for periphyton growth.

477. For the reasons noted above, it is my recommendation that Policy 5.3 be deleted (and replaced with alternate policies sought by submitters), and as

such the current 20% increase in DIN levels enabled under the Policy would be removed.

478. For completeness, it is noted that the underlying tension at a policy level relating to this increase providing for headroom to be created in the short term while some land use intensification is also enabled, and the environmental impacts of doing so, is discussed further in relation to the land use rules.

14.5.4 Rolling Average for Load Limits (Policy 5.3 and Schedule 1 limits)

479. Related to the discussion on load limits, is how the proposed load limits have been calculated. As stated in both Policy 5.3 and reflected in the note under Schedule 1, the proposed load limits are based on the annual average tonnes per year for DIN and DRP between 2005 and 2010.

480. Hurunui District Council and Te Rūnanga o Ngāi Tahu and others (Submitters 88 and 116) seek that the load limits are based on the most up to date data. More specifically, the Hurunui Waiau Zone Committee (Submitter 81) seeks that Schedule 1 is amended to use the average annual load based on the last six years Hurunui District Council (Submitter 88) also seek that the load limits in Schedule 1 are based on a six-year rolling mean.

481. If the load limits are retained, it is my view that it would be appropriate to use the most recent data. This is on the basis that the outcomes sought by the ZIP, and reflected in the objectives of the HWRRP, are for water quality to be maintained at or about its "*current*" state, with the most recent data more accurately reflecting this current state. I also note that a further year's data should be available by the time of the hearing, and including this in the calculation for the Schedule 1 load limit would allow for the average to be calculated over a longer period. It is however not clear to me how a rolling average could be used within the schedule, as presumably this would require updates being undertaken annually, which in my view, would require a plan change. It is further my view that this could incrementally allow for increases in the load limit, which would not assist in meeting the Plan's water quality objectives. Based on this, it is my recommendation that Schedule 1 be amended as follows. For completeness I note that should a further year's data be available by the time of the hearing, I would recommend that these numbers are updated further. As identified by Fish and Game New Zealand (Submitter 113), a consequential amendment is also required to the 'Note' in Schedule 1.

"Schedule 1: Catchment Nutrient Load Limits

Catchment	**Monitoring site location**	**Nutrient Load Limits**	
		Dissolved Inorganic Nitrogen (tonnes/ year)	**Dissolved Reactive Phosphorus (tonnes /year)**
Hurunui	Mandamus flow recorder	~~40~~ 39	~~3.6~~ ~~3.2~~

Catchment	State Highway One flow recorder	~~693~~ 770	~~10.2~~ 10.7

Note: This limit is the 2005-201~~0~~1 average annual tonnes per year of Dissolved Inorganic Nitrogen and Dissolved Reactive Phosphorus. ~~Policy 5.3 provides for this limit to increase by 20% prior to 2017~~.

482. For completeness I note the recommendation of Mr Norton that the load limits should be reduced for scenarios where further water is taken, for example by 17%, 34% and 43% under allocation scenarios 'A and B block', 'ABC Seasonal' and 'ABC All Year' respectively. My understanding is that this reflects the impact that the river flows have on dilution of the load, as if there is less flow in the river for dilution then the load of contaminants arising from land must also be reduced in order to achieve current N and P concentrations. It is my view that the recommended new policies are the most appropriate way to address this, rather than any changes to Schedule 1, for two reasons:

a. The actual allocation of water has not yet been determined, with the 'ABC Seasonal' and 'ABC All Year' representing particular scenarios only, rather than a specific proposal;

b. The Plan provides a framework which allows for the consideration of the effects of water take and use applications on water quality, and therefore the consideration of the effects of the take on loads and concentrations would be factored in to the consideration of any specific proposal.

14.5.5 Maintaining viability of existing land uses

483. It is my view that determining the most appropriate limits to achieve the HWRRP's objectives requires consideration of a number of factors, including the economic costs of water quality limits, and the balancing of these with environmental costs. As noted in Mr Norton's evidence for example, and discussed above, high costs associated with mitigation measures to control nitrogen may justify the risk taken on the environment of having lower standards, with a value judgement being required. Extending beyond the mitigation considered in Mr Norton's analysis, the evidence of Dr Tanner also provides some quantification of costs associated with establishing and maintaining wetland areas in the Lowry Peaks and St Leonard's Drains to mitigate nutrient levels.

484. Fonterra Co-operative Group Ltd (Wellington) and Dairy NZ Inc (Submitters 100 and 134) consider that either the nitrogen load limit needs to be relaxed, or there needs to be acceptance that the amount of land sought to be irrigated is not achievable within the proposed limits. Dairy NZ Inc (Submitter 134) in particular states that it has carried out modelling indicating that the nutrient load limit could have a significant impact on farm profitability and property values.

485. Another of the concerns raised by submitters in relation to water quality limits such as load limits, is that as currently un-irrigated land is irrigated and intensively farmed, and the load limits are reached, existing land users' viability will be threatened. Amuri Irrigation Company Ltd (Submitter 83) seeks to include a new objective (discussed above) and two new policies, which in

my view include a specific focus on addressing adverse effects on existing land users' viability.

486. Dairy NZ Inc (Submitter 134) seeks that suitable measures are put in place to ensure that new development (i.e. land use intensification) does not affect the ability of existing farmers to continue to operate efficiently. They raise concerns that with new development, there is an increased risk of the load limits being exceeded, and that this in turn could result in constraints being placed on their own operations, with existing users also having to address the resultant effects. Fonterra Co-operative Group Ltd (Wellington) (Submitter 100) similarly seeks that managing for future growth needs to take into account impacts on existing farmers. Mr and Mrs Black (Submitter 11), while supportive of the proposed nutrient levels, raises concerns about the effects on existing farmers resulting from new development. Mr Higgins (Submitter 45) considers that if existing irrigators are farming at best practice in terms of nutrient levels, they should not the bear costs if nutrient levels rise from new development.

487. Further related to this, is the intention that headroom will be created by existing users. Submitters such as Dairy NZ Inc (Submitter 134) consider that there are not sufficient incentives in place for existing farmers to create headroom, and coupled with concerns about effects of further land development on their own viability, argue that new developers need to ensure that environmental standards sought in the Plan are met as a result of any increase in effects they are responsible for.

488. It is my view that the regulatory approach taken in the HWRRP only extends as far as requiring (through regulatory means) that existing land users move towards best practise through implementing one of the ASM programmes required under Rule 10.1, prior to 2017, in order for them to be considered as permitted activities. This provides for a collective approach whereby individual land users are required to join collective ASM programmes, allowing, for example, an industry group or irrigation scheme to take the lead in defining what best practise is, how it is to be implemented, and how individual farms are to be audited within the wider programme.

489. Changes in land use, (i.e. intensification) must also implement one of the ASM programmes specified, as well as meeting the load limit specified in Schedule 1. Dairy NZ Inc (Submitter 134) seeks that new developers (i.e. intensifications of land use) be required to meet higher nutrient loss standards where they may result in the catchment load limit being exceeded. While I note that new developers are not required to meet higher nutrient loss standards as such, should the catchment load limits be exceeded and consent be required for new development, implementation of greater mitigation measures may be required to address the potential adverse effects. In my view this is appropriate.

490. I accept that if there is a perception that existing users could be targeted and face more stringent controls in future, because of intensification occurring that affects water quality, and this could act as a disincentive to establish the headroom necessary to allow for that intensification to occur within the currently defined limits. However, from the evidence of Mr Norton and Mr Brown, it appears to me that the alternate approach to the non-statutory approaches proposed to complement the HWRRP, would be to introduce NDAs (or other similar mechanisms) applicable to existing users. They could then be required, by the Plan, to reduce their discharge by a specified amount

or percentage in order to create headroom. In effect, if the non-regulatory approach does not create the headroom desired, such a regulatory approach may well be required in order to meet the Plan's environmental and economic outcomes. Therefore it is my view that the Plan's current approach is more flexible for existing land users.

491. I also consider that effects on existing land users from any requirements (both under the current Plan, and potentially in the future) need to be considered in the context of the parallel development approach of the CWMS and Objective 7.2.2 of the PRPS. In my view, the basic premise of the parallel development concept is that enabling further water use to provide for economic well-being must occur in parallel with other factors including maintenance (or improvement) of water quality to provide for environmental and cultural well-being. It can therefore be reasonably expected that existing users will need to address the adverse effects of their land use on water quality, in order to concurrently allow for further development to occur within the identified water quality limits.

492. I also note that this links back to the above discussion, in that the proposed 20% increase in nitrogen signalled through Policy 5.3 as being appropriate until 2017, could allow for new development (while being a discretionary activity) to occur. The effects of this, in time, could result in more stringent controls being considered necessary. In particular, the 20% increase proposed only applies until 2017, as under part (b)(iii) of Policy 5.3, after 2017, it is sought that DIN is improved back to the 2005-2010 levels or better. In effect, through the consenting process, intensification with up to a 20% increase could occur prior to 2017, with pressure then coming on all land users (not just those having contributed to the 20% increase in that period) to reduce the load back to 100%.

493. In relation to the amount of irrigable land that is achievable within the proposed water quality limits, I note that Mr Norton has specifically sought to address how much extra land could be irrigated while ensuring water quality and associated values are maintained within the limits proposed in the HWRRP. He concludes that it is not possible at this time to take and use the full A, B and C blocks proposed in the HWRRP for the Hurunui River for intensified agricultural land use, while staying within the water quality limits designed to achieve Objectives 5.1 and 5.2. He considers that some further land use intensification in the Hurunui catchment would be possible while achieving water quality limits, provided that extensive mitigation measures are employed.

494. In relation to mitigation measures, it is my view that both existing and new land users will need to employ the best known measures to reduce nutrient loss to land, if the economic potential of the Hurunui Catchment from land intensification enabled by further irrigation development is to be realised, while maintaining the instream values sought by the HWRRP. Mr Brown acknowledges that this will be a difficult task, and identifies the risks associated with the implementation of the programme to reduce nutrient losses from existing land uses and thus creating headroom for new water users. As he outlines, there are a number of approaches proposed as part of implementation of the ZIP that sit outside the regulatory framework of the HWRRP itself, but which will assist in achieving the Plan's objectives in terms of maintaining in-stream values while enabling further water use.

14.5.6 Summary of Key Issues

495. It is my view that there are a number of issues that will need to be considered by the Hearings Panel, and ultimately require a value judgement to be made. However a number of these are fundamentally related and can be summarised as follows:

a. Are the water quality objectives (5.1 and 5.2) the most appropriate for achieving the purpose of the RMA, in terms of whether or not they appropriately balance enabling water use and land use intensification against safeguarding the water's life-supporting capacity and avoiding, remedying or mitigating the adverse effects of water use and land use intensification on the environment, given Mr Norton's analysis that allocating A and B block water alone will push close to water quality limits, even with mitigation measures undertaken to create nutrient headroom?;

b. Is relying on existing users to create headroom for new users largely through non-statutory methods (alongside some regulatory back-stops) an effective approach, bearing in mind that without such headroom, limited achievement of the Plan's more economic-focussed objectives will be possible. In particular, is relying on such measures post-2017 sufficient to achieve the Plan's objectives, given that the Plan currently assumes a 20% increase in the short term can be pulled back to the current levels (and notwithstanding that it is recommended the relevant policy be replaced)?;

c. Will the changes sought to provisions by some submitters in relation to allowing for a higher nitrogen limit, but a lower phosphorus limit, more appropriately achieve the objectives (and depending on (a) above as to whether these are retained in their current form), taking into account the perceived costs associated with nitrogen management; or do the perceived environmental costs (expressed in a number of submissions) of allowing for nitrogen increases outweigh the potential economic benefits of doing so?

496. These key issues also feed into a number of the considerations on specific Plan provisions that are discussed further below.

14.5.7 Load limits for Waiau River and Hurunui River Tributaries (Policy 5.4)

497. It is my understanding that Policy 5.3 of the HWRRP focuses on the Hurunui River catchment, because at the time the Plan was prepared, data on water quality for this river had been gathered and considered as part of the LUWQPP, without the equivalent level of information being known about existing water quality in the Hurunui tributaries or the Waiau River catchment. As such, the HWRRP does not set load limits for these other areas in Schedule 1. However, water quality and achievement of the Plan's objectives will still need to be considered as part of consenting in these areas. Policy 5.4, which applies to these areas is:

> "*To progressively set nutrient limits in tributaries of the Hurunui River, at the river mouth and in the Waiau River Catchment to ensure that Objective 5.1 and 5.2 are met.*"

498. A number of submitters[51] support the Policy and seek its retention, on the basis that it gives effect to the purpose of the RMA, the NPSFM and the vision and principles of the CWMS. Ravensdown Fertiliser Co-operative Ltd and Hurunui Water Project Ltd (Submitters 102 and 127) conditionally support the Policy, provided that amendments are made to Objectives 5.1 and 5.2 as discussed earlier.

499. Phoebe Irrigation Ltd (Submitter 86), while supporting the introduction of nutrient limits in the tributaries, seeks that a framework be provided for capturing existing load limits and for setting future load limits using a collaborative approach. Similarly, Dairy NZ Inc (Submitter 134) supports the progressive setting of limits as proposed, but seeks clarification of the process for setting such limits, supporting the approach developed in the LUWQP. Federated Farmers of New Zealand (Submitter 123) supports the policy provided that reasonable nutrient limits are established, which can be met in a cost-effective manner.

500. It is my view that because limits are not proposed for these other water bodies in the HWRRP, any new limits would need to be introduced through a plan change proposal, with the policy indicating that this will occur. As noted earlier, such a process includes statutory consultation, allowing submitters to make comment at the time specific levels are proposed. In my view it is not necessary or appropriate to specify how any future limit-setting process should be undertaken. This is because it is my view that it is more appropriate to allow any future council to determine the process to be followed, depending on the circumstances and statutory framework at the time, rather than tying them to a particular course of action through the HWRRP. I also note in relation to Hurunui Water Project Ltd's (Submitter 127) comments on cost-effectiveness, that the RMA requires that costs and benefits will need to be considered as part of any plan change, in the determination of whether any proposed limits are the most appropriate to achieve the Plan's objectives.

501. New Zealand Fertiliser Manufacturers' Research Association Inc (Submitter 87) supports the intent of the policy to set limits in other areas, but has concerns regarding how the limits will relate to land use and mitigation measures. I consider that this is addressed in the discussion above, which sets out the relationship between the water quality outcomes sought in the Plan's objectives, and the proposed methods to achieve these outcomes. In essence, it is anticipated that land use regulation will achieve the qualitative targets sought in Objectives 5.1 and 5.2, with mitigation measures allowing for headroom to be created so that further land use intensification can occur whilst still achieving these objectives.

502. The submitter also queries whether river mouth limits, referred to in the policy, are the most appropriate measure to manage the water quality effects of land use activities. It is my view that such consideration is consistent with Policy C1 of the NPSFM, because it recognises and addresses the integrated nature of land use and water quality, including effects of water quality on the coastal environment, and thus assists in achieving Objective C1 of the NPSFM. In my view, this also gives effect to Objective 1 of the NZCPS because it assists in safeguarding the functioning of the coastal environment by maintaining

[51] Hurunui District Council, Fish and Game New Zealand, Te Rūnanga o Ngāi Tahu and others, Royal Forest and Bird Protection Society and Ms Sage (Submitters 88, 113, 116, 136 and 139).

coastal water quality, recognising that this is affected in part by water quality in these rivers.

503. Department of Conservation (Submitter 90) seeks that the policy state a timeframe within which the limits are to be set (by 2017) rather than referring to these being set "*progressively".* Policy E1(b) of the NPSFM directs, in relation to time limits that regional councils implement the policies as promptly as is reasonable in the circumstances, and so that it is fully completed by 31 December 2030. Under Policy E1(c), where a council considers it impractical to complete implementation of a policy fully by 31 December 2014, the council may implement it in defined time-limited stages in order to meet part (b) above, with formal adoption of these stages required 18 months after gazettal of the NPSFM, being 12 November 2012. It is my view that in order to give effect to this policy overall, if the Council does not consider that water quality limits can be set for other Hurunui River tributaries, the river mouth and the Waiau River Catchment by December 2014, then it must formally set out in what time-limited stages such limits are to be set by. It is my understanding that there is no requirement for the adoption of these stages to be contained within the HWRRP itself, and given that implementation will require further Council resources, it is my opinion that it is more appropriate for this timeframe to be defined outside of the HWRRP process, such as through the annual planning cycle.

504. Ms Beaven (Submitter 79) seeks that nutrient limits in tributaries and at river mouths be set instantly, rather than progressively. In my view it would not be efficient or effective for such limits to be established immediately, because not enough is known about water quality in these areas. As with my comments above, it is my view that it is entirely consistent with the NPSFM that these limits are implemented progressively.

505. Independent Irrigators Group (Submitter 92) seeks that Policy 5.4 is amended to state "*investigate and consult on*", rather than "*progressively set*". It is my view that given a Plan Change process would be required in order to set such limits, and as the setting of the limits will necessarily involve investigation and consultation, that it is not necessary to state this in the policy. Further, in my view investigating and consulting on limits (rather than setting them) would not be sufficient to give effect to the requirements of the PRPS or NPSFM.

506. Hurunui Water Project Ltd (Submitter 127) also seeks that the policy be amended to require that periphyton limits are also set alongside nutrient limits. In line with the discussions above in relation to load limits, nutrient concentrations and periphyton limits, and the comments made my Mr Norton in particular, it is my view that as information and understanding increase, it may be determined that it is most appropriate to set both periphyton and nutrient limits in order to achieve the Plan's objectives. However other limits may in time be proven to be more appropriate. As such, it is my view that Policy 5.4 should be amended to refer to "*water quality limits*" generally, with the specific type of limit left to be determined through a Plan Change process. In my view this is also more consistent with the PRPS which refers to "*water quality standards*", and the NPSFM which refers to "*freshwater quality limits*". The policy is therefore recommended to be amended as follows:

> "***Policy 5.4*** *To progressively set ~~nutrient~~ water quality limits in tributaries of the Hurunui River, at the river mouth and in the Waiau River Catchment to ensure that Objective 5.1 and 5.2 are met."*

507. The Hurunui Waiau Zone Committee (Submitter 81) seeks deletion of Policy 5.4, along with Policies 5.1 – 5.3, as discussed earlier, and its replacement with a policy requiring all properties within the Waiau and Hurunui catchments to be managed to reduce nutrient loss from land. Ngāi Tahu Property Ltd (Submitter 121) also seeks that Policy 5.4 is deleted. In my view, it is not appropriate to delete the policy, as I consider it necessary to give effect to the NPSFM. In particular, it is my view that it is quite clear that in order to give effect to Policy A1 of the NPSFM, freshwater quality limits must be set, and the removal of Policy 5.4 does not indicate in any way how Policy A1 is to be implemented.

14.5.8 Best Management Practice

508. One of the key recommendations in the ZIP (p. 2) is the "*implementation of* sustainable *best practice audited self management programmes, particularly for water quality, led by the community/land user based land care groups and industry… backed up by a regulatory framework*". As noted above, the ZIP and HWRRP anticipate improvements in farm management to create nutrient headroom for new intensification of currently un-irrigated land, thus achieving the development aspirations of the Plan, while also meeting its environmental outcomes. Moving farm management to 'best practice' is therefore critically important in creating this headroom and ensuring that all the Plan's objectives can be met. The approach proposed in the HWRRP to implement this is contained in Policies 5.1 and 5.2 which state:

> *Policy 5.1* *To take a tributary and community based approach to managing water quality and improving nutrient management practices.*
>
> *Policy 5.2* *To ensure all existing and new land use activities in the Nutrient Management Area shown on Map 4, have best nutrient management practices in place by 2017.*

509. These policies are in turn implemented through Rules 10.1 and 10.2, which require all rural landowners or occupiers to implement one of the ASM programmes listed in the rules.

510. Ravensdown Fertiliser Co-operative Ltd (Submitter 102) supports both Policy 5.1 and Policy 5.2. A number of other submitters[52] support Policy 5.2 or its intent.

511. Amuri Irrigation Company Ltd (Submitter 83), while supporting a tributary and community based approach being undertaken, raises concerns that Policy 5.1 does not define what such an approach represents and how it is to be applied, and as such is uncertain. In my view it is not necessary for the approach to be defined in the policy. It is my view that the policy indicates the approach to be taken, and that the exact approach is contained in the rules that are to implement the policy. In this case, the tributary and community based approach relates to the requirement to be part of a catchment group, irrigation scheme or industry sector group (or for smaller properties,

[52] New Zealand Fertiliser Manufacturers' Research Association Inc, Hurunui District Council, Ravensdown Fertiliser Co-operative Ltd, Te Rūnanga o Ngāi Tahu and others, and Hurunui Waiau Project Ltd (Submitters 87, 88, 102, 116 and 127).

implement a LBMP). Therefore, I do not consider that there is any uncertainty.

512. Independent Irrigators Group (Submitter 92) seeks that Policy 5.2 is modified to "*encourage*" rather than "*ensure*" best practice is implemented. This appears to relate to concerns that the regulatory implementation for rules pertaining to the Waiau catchment has not been consulted on. However, it is my view that encouraging is unlikely to be sufficient to achieve the Plan's objectives.

513. As noted earlier, a number of submitters[53] seek the deletion of policies 5.1-5.3, whilst recommending alternate policies. In relation to best practise management, a new Policy 5.3 is sought: "*to ensure that all properties in the Hurunui and Waiau Catchments are managing their land in a way that reduces as far as practicable, nutrient loss from their land."* In my view, it is relevant to consider the proposed rule and policy package 'in the round', as to whether it is the most appropriate approach to achieve the Plan's objectives. Notwithstanding submissions made on the rules (and discussed further later in this section), it is my view that the existing policies 5.1 and 5.2 are more appropriate than the alternate policy, because they provide a greater level of certainty about the action to be undertaken, which is then in turn reflected in the rules.

514. In relation to the term '*best practice*' and the reference to '*best nutrient management practice*' in Policy 5.2, some submitters have raised concerns about exactly what best practice is. In relation to Policy 5.2, Amuri Irrigation Company Ltd (Submitter 83) seek that if "***best nutrient management practice"*** is intended to relate to those practises prescribed within the ASM programmes listed in Rules 10.1 and 10.2, that this is made clearer. Amuri Irrigation Company Ltd and Hawkins Consulting Ltd (Submitters 83 and 96) request that a definition is added to explain what *'best practice'* or *'best nutrient management practice'* is. Dairy NZ Inc (Submitter 134) seeks that nutrient loss benchmarks are set for different soil types based on established good management practices, and that these are defined. Irrigation New Zealand Inc (Submitter 104) considers that, in order to fit with national and regional terminology, "*best nutrient management practice*" should be replaced with "*good management practice*" in Policy 5.2. Phoebe Irrigation Ltd (Submitter 86), while supporting best practice nutrient management, is concerned that the definition and understanding of that best practice is, is not well understood.

515. It is my view that '*best practice*' is an imprecise term, in that what defines best practise is likely to change over time. For example, as understanding increases and technology changes, what is likely to be considered best practice at this point in time will not be the same as what may be considered best practice in future. As noted by Dairy NZ Inc (Submitter 134), best management practices may also differ depending on different conditions such as soil types. I also consider that in the future, land uses may also change further, as they have done in terms of recent trends towards dairying in Canterbury.

[53] Hurunui Waiau Zone Committee, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 81, 113, 136 and 139).

516. I also note that mitigating the effects of intensified land use may also differ depending on where a property is located. As outlined by Mr Brown, on some properties significant changes in current farming practices will likely be required, whereas on others the changes required will be relatively minor. He acknowledges that this may mean a net cost to some land users in implementing change.

517. The proposed HWRRP does not seek to define best practice; rather it seeks to require all farms, through Rules 10.1 and 10.2, to join collective ASM programmes as defined in Schedule 2, to achieve a high standard of environmental management, including nutrient management. It is my view that this approach is an appropriate way to implement the policies.

518. This best practice approach is a critical aspect of the proposed HWRRP, and one that links back to the ZIP in terms of taking a community or land user based approach in order to implement ASM programmes. I note that Fonterra Co-operative Group Ltd (Wellington) and Dairy NZ Inc (Submitters 100 and 134) support the implementation of ASM programmes as a management option to help manage nutrient losses. I also note that catchment groups, irrigation schemes and the industry sector groups have the ability to develop a collective agreement which will meet the requirements of Schedule 2. In effect, these programmes will in themselves define what best practice is for a particular industry sector, catchment or irrigation scheme area, taking into account factors such as soil types.

519. While I agree that defining best practice in the HWRRP could provide greater certainty for land managers, it is my view that it is not appropriate to do so within the Plan itself, because of the variation in what this will be in different areas, and because the Plan establishes a framework that in my view is sufficient to achieve the outcomes sought in relation to managing nutrient concentrations entering water bodies. I also have concerns that seeking to define the term in the Plan may limit the innovation that could be created by the collective approach envisioned by the Zone Committee.

520. Related to this, the Hurunui Waiau Zone Committee, Fish and Game New Zealand, and Royal Forest and Bird Protection Society (Submitters 81, 113 and 136) seek amendments to Schedule 2, which outline the matters to be addressed in any ASM programme required under Rules 10.1 and 10.2. Hurunui Water Project Ltd (Submitter 127) also seeks that greater clarity is provided around the ASM mechanisms included in Schedule 2, in terms of what they need to include to ensure they are able to be approved by Council, and therefore provide certainty that the activities are permitted. New Zealand Fertiliser Manufacturers' Research Association Inc (Submitter 87) supports reference within Schedule 2 to the Code of Practice for irrigation system and design, and seeks that this be extended to refer to the Code of Practice for Nutrient Management. Ravensdown Fertiliser Co-operative Ltd (Submitter 102) seeks amendments to the Schedule relating to concerns about the general nature of the systems and approach proposed, and their belief that the Plan's provisions should be strengthened through reference to best practise, including the preparation of Nutrient Management Plans and utilisation of the Overseer Model.

521. It is my view that the changes sought by Hurunui Waiau Zone Committee, Fish and Game New Zealand, and Royal Forest and Bird Protection Society (Submitters 81, 113 and 136) are generally more appropriate than the current wording, because they provide a greater level of clarity and detail as to what

is expected in any system, agreement or plan. While I consider that these changes will also go some way towards addressing the concerns of the other submitters, it is my recommendation that further amendments are made to address these submitters' concerns, to provide greater clarity and in turn better achieve the Plan's overarching objectives. These changes essentially are to:

a. Provide greater clarity around what is required in an ASM programme, including changes to ensure consistent terminology;

b. Allow for industry to define, through the ASM programme, good practice for specific land uses in particular areas;

c. Require utilisation of the Overseer model to record losses.

522. Because of the extent of the recommended changes proposed, these are not included here, but are contained in **Appendix 2**.

523. The New Zealand Pork Industry Board (Submitter 112) requests the redevelopment of Schedule 2 in consultation with relevant industries, raising concerns about the role of industry in developing the Industry Certification Systems. However, it is my understanding that ultimately it would be industry developing the certification system, which under Rules 10.1 and 10.2 would be implemented by a land owner or occupier. In my view, no further changes are therefore required in relation to this submission.

524. Amuri Irrigation Company Ltd (Submitter 83) seeks additional wording requiring that the "*Management System"* also include requirements for consideration of whether the proposal will impact upon the operation of existing land uses. It is my view that this is not appropriate, as it is outside the scope of what that management system (ASM programme) is to address. Namely, the ASM programme is about identifying goals and outcomes sought in managing the use of the water and land resources and how these are to be achieved. It is not an assessment of effects.

525. I also note that other submitters seek amendments to the definitions of the various ASM programmes. In general, it is my view that the amendments recommended in relation to clarifying Schedule 2 adequately address these concerns, without requiring changes to the definitions of the ASM programmes.

526. Related to this, New Zealand Fertiliser Manufacturers' Research Association Inc (Submitter 87) seeks clarification as to how the ASM programme will link the land use activity and the annual nitrogen and phosphorus load at the down-stream monitoring site to meet required standards in Schedule 1. It is my understanding that there is no requirement within the ASM programme to make this link; however, I note that the purpose of the ASM programmes are to assist in reducing load limits in order to allow for further land intensification while also maintaining current water quality, and that essentially the ASM will address outcomes sought and measures undertaken in order to assist in reducing load limits.

14.5.9 Change in Land Use

527. Under Rule 10.2, any "*change in land use"* is permitted where the load limit in Schedule 1 is met and a specified ASM programme is implemented by a land owner or occupier. A change in land use is defined in the HWRRP as being:

For the purposes of this Plan a change in land use, is calculated on a per property basis, and is determined as being either

a) an increase greater than 10% in the stocking number measured in stock units; or,

b) an increase greater than 10% in the release of Nitrogen or Phosphate to land which may enter water, measured on a kg/ha basis, but calculated on the gross load per property.

528. Phoebe Irrigation Ltd (Submitter 86) raises concerns that an on-farm practise such as feed cropping could be considered a change in land use under this definition, and seeks that the definition apply only where an entire farming system is changed.

529. New Zealand Pork Industry Board (Submitter 112) seeks deletion of part (a) of the definition on the basis that the focus should be on the effects of the change in land use, namely the release of N and P, as covered by part (b). They argue that restricting the number of animals does not allow land users to mitigate effects of increased stock in terms of nutrient leaching. The Hurunui Waiau Zone Committee, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 81, 113 and 136) also seek deletion of part (a) of the definition, noting that stock units can vary substantially from year to year. They further seek that part (b) refer to the calculation being based on the long term average losses. Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 113 and 136) also seek that the definition refers to nitrate rather than nitrogen. Hurunui Waiau Zone Committee and Royal Forest and Bird Protection Society (Submitters 81 and 136) also consider that it should be clarified that the increase applies from the date the limit in Schedule 1 is exceeded, and seek amendments to the definition in this regard. Te Rūnanga o Ngāi Tahu and others (Submitter 116) raise similar concerns to those above, that the definition may be impossible to practically implement for a number of reasons. As with other submitters, they consider that the definition should focus on what is sought; the lessening of the release of N and P and its effects on water quality.

530. I generally agree with these submitters that there are difficulties with using stock number changes as a measure, and that the focus should be on the effects that Rule 10.2 (which relates to changes to land use) is trying to manage, being the increase in nutrients and effects on water quality. I therefore agree that it is more appropriate to delete part (a) of the definition, and to amend part (b) to refer to long term average losses. However, because part (b) does not refer to when the increase is to be measured from, it is my opinion that if (a) is deleted and the long term average referred to, it is also necessary to specify that the increase applies from the time the Plan is made operative; otherwise the deletion of (a) could allow for incremental changes in land use which in my view would not achieve the Plan's objectives and policies that might otherwise be captured by (a). I further consider that as 'nitrogen' is a more encompassing term than 'nitrate', it is more appropriate.

531. This is consistent with concerns raised by Te Rūnanga o Ngāi Tahu and others (Submitter 116) that the Plan's provisions could result in confusion as to whether a specific land use is permitted (discussed further below in relation to the rules, but also relevant to this discussion). In my view it is not appropriate to amend the definition such that the increase only applies from the date the limit in Schedule 1 is exceeded. This is because any change in

land use is permitted if the Schedule 1 limits are not exceeded, but the definition change would also effectively remove the requirement to implement an ASM programme. I therefore recommend the definition is amended as follows:

> *For the purposes of this Plan a change in land use, is calculated on a per property basis, and is determined as being ~~either~~*
>
> *~~a. an increase greater than 10% in the stocking number measured in stock units; or,~~*
>
> *b. an increase greater than 10% in the long term average release of Nitrogen or Phosphate to land which may enter water, measured on a kg/ha basis, but calculated on the gross load per property from the date this plan is made operative.*

532. Ravensdown Fertiliser Co-operative Ltd and Hurunui Water Project Ltd (Submitter 102 and 127) raise concerns that the 10% amount chosen is not effects based and is arbitrary, on the basis that a 10% increase in stock or Nitrogen/Phosphate release may have little or no effects. They seek that the definition be replaced with an effects based approach to defining a change in land use. However the submitter does not suggest such an 'effects based' definition. I also note that the approach taken in the Plan is focussed on addressing cumulative effects from land use change on water quality, with the definition providing for a permitted activity level. While a 10% increase on one farm may have little or no effects when considered in isolation, the Plan seeks to address, and provide a process for considering, the cumulative effects of such increases on the water quality policies and objectives in the Plan. As such, it is my view that the definition and approach are effects-based, and the changes sought by the submitters would not be more appropriate to implement the Plan's policies and achieve its objectives.

14.5.10 Lead in period

533. Under Rule 10.1, existing rural land uses, as at 1 October 2011, have until 1 January 2017 to implement one of the specified ASM schemes, in order to remain a permitted activity.

534. Rule 10.2, which pertains to changes in land use resulting in an increase of nitrogen or phosphorus discharge, applies only to such changes after 2017.

535. Essentially, the Plan provides for a 5-year buffer period to allow non-statutory measures to be undertaken to address water quality. This is reflected in the ZIP, as well as in the CRC's wider work programme. Whatever land use existed, as at 1 October 2011, can continue without regulation, as can any change to this land use prior to 2017. Within that period however, all land owners or occupiers must join one of the specified ASM programmes. Then, after 2017, further land use changes (being a 10% or more increase in N or P release as discussed above) are only permitted if an ASM programme is in place and the load limit in Schedule 1 is met.

536. In my opinion, the key question in relation to this matter is whether it is appropriate to rely on non-statutory measures in the short term to implement the Plan's policies and meet its objectives, or whether the risks of this approach potentially not meeting the Plan's objectives are sufficient to justify a regulatory approach being taken prior to 2017, as sought by some

submitters. It is my opinion that the balancing of the risks requires a value judgement to be made. For this reason, the following set outs the two main options, the submission points raised in relation to them, and the risks associated with each option, rather than making a recommendation on which approach is the most appropriate.

537. **Option A – Continue with current approach proposed in HWRRP**. Under this approach, intensification (change of land use) could occur prior to 2017, regardless of the load limits, and with the requirement to implement an ASM programme within approximately 4 years. Within that period, it is intended that other non-statutory measures will be undertaken to address the effects of land use on water quality. The approach is consistent with Policies 5.1 and 5.2, in that a tributary and community approach is undertaken, both in terms of non-statutory measures prior to 2017, and regulatory measures after that time, both of which seek to ensure that best nutrient management practises are in place. If within the next four years the average measured load increases above the Schedule 1 limit (i.e. the current average), any land use change after 2017 would require consent, with the regulatory part of the Plan framework applying.

538. The benefits of this approach are that changes in land use are enabled within the short term, with the intention that this will occur in parallel with headroom created through the non-statutory measures. In my view, the approach is therefore likely to assist in achieving the Plan's development objectives (e.g. Objective 3 and Objective 6), and is also consistent with the parallel process sought in Objective 7.2.2 of the PRPS (albeit that it relies on water quality being maintained through non-statutory means). This approach also aligns with the Council's wider LUWQ work programmes, which provide goals and a schedule for work to be undertaken to assist in achieving water quality improvements.

539. The proposed approach, which provides lead-in time before the regulatory framework is applied, is supported by Phoebe Irrigation Ltd and New Zealand Fertiliser Manufacturers' Research Association Inc (Submitters 86 and 87) on the basis that it allows land users time to introduce the specified systems and procedures.

540. I consider that there is a risk associated with this approach in that there is no statutory back-stop until 2017. It is therefore my view that changes in land use between now and 2017 could occur as a permitted activity, even if the load limit is breached, potentially resulting in significant increases in nutrient discharge, leading to the water quality outcomes (Objectives 5.1 and 5.2 and related policies) in the Plan not being met. I accept that this is addressed somewhat by effects on water quality being able to be considered as part of water take consents, which would also include assessment against the water quality policies and objectives of the Plan. I do however have some concerns about the effectiveness of this alone. This is because there may also be some instances where water has been allocated but is unused, and land use intensification using this water (where it can occur within existing consent conditions) can therefore occur without the requirement for consideration of water quality matters within a water take and use application process, and as a permitted land use activity.

541. **Option B – Amend Rule 10.2 to apply prior to 2017.** As sought by a number of submitters[54] Rule 10.2 could be amended to apply from the same time that Rule 10.1 does, i.e. 1 October 2011. The various amendments sought by submitters to the rule are on the basis that to ensure that further development can occur in parallel with the Plan's environmental objectives, all new land use activities should have best nutrient management practises in place immediately; or that if load limits are breached before 2017, land use changes should not be allowed as permitted activities.

542. Within this option, there are several sub-options that need to be considered:

a. Whether 1 October 2011 should be used, or the date the Plan is made operative;
b. Whether it should be a requirement for the load limit to be met from this date, or whether part (a) of the rule, which requires compliance with the load limit, should be amended (as sought by Water Rights Trust Inc (Submitter 48)) to apply from 1 January 2017;
c. Whether the implementation of an ASM programme should remain a requirement on or before 1 January 2017, or required as part of the land use change.

543. It is my opinion that the benefits and risks of Option B are essentially the opposite of those relating to Option A, being that this approach is less likely to assist in achieving Objectives 3 and 6 of the Plan, and the parallel process sought in Objective 7.2.2 of the PRPS, but more likely to assist in ensuring that the water quality outcomes are met. This option would also provide a framework for addressing land use changes resulting from the use of allocated but currently unused water.

544. In relation to the benefits and risks of the sub-options, I note the following:

a. I consider that there are significant efficiency and fairness issues with using the 1 October 2011 date, given that it may mean retrospective consents are required. For example, if a land use change occurred in December 2011, that was permitted under the HWRRP rules as they were at that date (because Rule 10.2 as notified applied from 2017), amending the rule to apply from 1 October 2011 might then mean the activity was not retrospectively permitted, and retrospective consent would be required. As discussed later in this report, there is also a potential issue with determining what land uses were in existence at 1 October 2011 and the suggested addition to Rule 10.1(b) would also better align with Rule 10.2 applying from the operative date of the Plan instead. Therefore I consider that if the rule is amended it would be more appropriate for it to apply from the operative date of the Plan, not from 1 October 2011.

b. Requiring the load limit to be met from this date, while potentially providing greater certainty that the water quality outcomes sought will be met, does not allow for a lead in period, and therefore, if the load limit is breached prior to 2017, any land use change would require consent. The risk with this is that it potentially does not allow time for

[54] Water Rights Trust Inc, Whitewater Canoe Club Inc and Whitewater New Zealand Inc, Mr Fox, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 48, 95, 109 113, 136 and 139).

headroom to be created in parallel with new development occurring. The further submission of Amuri Irrigation Company Ltd (Submitter 83) considers that the Plan specifically recognises that in the short term a limit on nutrients would hinder development and potentially curtail other policy outcomes sought, such as expansion of irrigable areas. There are also costs associated with this option in terms of consents required if the load from the current year (or, as recommended earlier, the rolling average) exceeds the Schedule 1 load limit (being the average over a longer period). Delaying its application allows time for this headroom to be created, but there is greater risk of not meeting the Plan's water quality objectives if this does not eventuate. It is my view that delaying its application would be more appropriate as this is more consistent with Policy 5.1 and the overall approach taken in the ZIP.

c. Requiring the implementation of an ASM programme by 1 January 2017 is consistent with the approach taken in Rule 10.1 in terms of allowing for a lead in period, and also means that those who change land use prior to this date can join the same ASM programme as existing land users will be required to. This is consistent with the collective approach promoted in the Plan under Policy 5.1. However, as noted by some submitters, it does not immediately require, through regulation, the implementation of best nutrient management practice, which is part of the implementation intended to meet Objectives 5.1 and 5.2. I consider that this risk could however potentially be addressed through appropriate consent conditions relating to mitigation or remediation measures to address water quality effects, being imposed on any water take permit issued prior to 2017. Conversely, if the ASM programme is required to be implemented at the time of land use change, it could undermine the collective approach – for example if the land use change occurs prior to 2017 in a catchment where a catchment agreement is being prepared but not finalised, (and therefore the owner/occupier changing land use could not yet join it) Rule 10.2 would be breached and consent would be required. Such consents would result in an ad-hoc approach that might undermine the collective approach. I note however that there are options to address this risk, which include that such land use consents could be issued for a limited period, after which the land user would be expected to join a collective agreement. Overall, my preference is for the latter because if both this and the application of the load limit is delayed, then Rule 10.2 would in effect remain the same as Option A.

545. A further matter relating to these options pertains to the concerns of Ngāi Tahu Property Ltd (Submitter 121) that land uses consented to before 2017, but not given effect to, are neither existing activities nor changes in land use. They seek that Rule 10.1 refer to "*any existing or consented land use as at 31 December 2016*". Similar to this, Hawkins Consulting Ltd (Submitter 96) seeks clarification as to how land owners or occupiers in the process of changing land use are to be treated, seeking that these developments are allowed to be completed. New Zealand Fertiliser Manufacturers' Research Association Inc (Submitter 87) also seeks clarity on which requirements apply to new land use or changes to existing land use which occur during the interim period between 1st October 2011 and 1st January 2017. As Rule 10.1 applies to whatever land use existed as at 1 October 2011, it is my view that

the rule would apply to the land use at that time. It would therefore not apply to the consented use, because at 1 October 2011 the consent had not been implemented. Under the rules currently proposed, the consent could be implemented prior to 2017 without a further consent being required, provided that an ASM programme is implemented by that date. However, if changes sought to Rule 10.2 by other submitters are accepted, then the change in land use (i.e. the implementation of the consent) would be required to meet Rule 10.2, rather than being permitted under 10.1. This adds a further consideration to the options discussed above.

546. Notwithstanding that I have not made a specific recommendation on whether Option A or Option B is more appropriate, it is my opinion that should Option B, on balance, be preferable to the Hearings Panel, the changes to rule wording should be as follows (note this also includes changes that relate to the recommended changes to the definition of change in land use):

> ***Cumulative Effects of Land Use on Water Quality***
>
> *Rules 10.1 and~~, 10.2,~~ 11.1 ~~and 11.2~~ do not come into effect until 1 January 2017. The Rules are included here now to provide a transitional lead in period to allow land managers to modify their farming practices outside of a regulatory framework.*
>
> ***Rule 10.2***
>
> *~~After 2017,~~ From [date this Plan is made operative], any change in land use (refer Part 5 – Definitions), ~~resulting in an increase to a discharge of nitrogen or phosphorous which may enter water,~~ in the Nutrient Management Area shown on Map 4, is a permitted activity, provided the following conditions are complied with:*
>
> *(a) the annual nitrogen and phosphate load at the downstream water quality monitoring site is less than the limit specified for that site in Schedule 1, from 1 January 2017; and,*
>
> *(b) ~~on or before 1 January 2017,~~ one of the following is being implemented by the landowner or occupier:*
>
> *(i) an Industry Certification System; or*
>
> *(ii) a Catchment Agreement; or*
>
> *(iii) an Irrigation Scheme Management Plan; or*
>
> *(iv) a Lifestyle Block Management Plan.*
>
> *…*
>
> ***Rule 11.2***
>
> *From [date this Plan is made operative],~~After 2017,~~ any change in land use~~, resulting in an increase to a discharge of nitrogen or phosphorous which may enter water, in the Nutrient Management Area shown on Map 4~~, which does not comply with one or more of the conditions of Rule 10.2 is a discretionary activity.*

547. Related to the above discussion, a number of submitters have also commented on the specific lead in period proposed. Irrigation New Zealand Inc (Submitter 104) considers that the 2017 deadline is unrealistic and that a 10 year target would be more realistic. Ms Campbell (Submitter 118) seeks that the lead in period is reduced to 2014, and Ms Palmer (Submitter 114) to 2015. In terms of the date of the lead in period (1 January 2017) for implementing ASM programmes, I note that this is generally consistent with that currently proposed for the LWRP (1 July 2017), and in my view none of the submitters have sufficiently demonstrated why a longer or shorter timeframe would be more appropriate. Further, I note that this timeframe is consistent with work that the Council is doing outside of the HWRRP process itself to assist in the implementation of ASM programmes. Therefore a change in this date would affect these work programmes, and in my view no compelling evidence has been put forward as to why this should occur.

548. Mr B and Ms J Demeter (Submitter 125) seeks that the Plan includes the addition of consequential actions if nutrient loads are exceeded in 2017. It is unclear however, what such 'consequences' would be. I note that in any case, the Plan currently requires resource consents to be obtained for any changes of land use, if the load limit is exceeded in 2017.

14.5.11 Rules

549. The following matters are those relating to rules that have not been addressed in the discussion above. For completeness it is noted that a number of other submission points have been made on the rules, but where these have been discussed in general above, they are not repeated here.

550. Z Energy Ltd, BP Oil NZ Ltd, Mobil Oil NZ Ltd and Caltex NZ Ltd (Submitter 14) seeks that Rule 10.1 be amended so that it only applies to land uses that result in discharges of nitrogen or phosphorus which may enter water. Similar concerns are raised by Independent Irrigators Group (Submitter 92). I note that Rule 10.1 as currently written would require any land use in the Nutrient Management Area (NMA) shown on Map 4 to implement one of the defined systems, plans or agreements. The NMAs are those areas within the zone that are not identified within the Hurunui District Plan as urban areas, and therefore encompass all rurally-zoned land. In my view it is not efficient or effective for all land uses in the rural area to be required to implement one of the defined ASM programmes, given that there may be land uses that do not result in discharges of nitrogen or phosphorus which may enter water. As such, I agree with the amendments sought by the submitter, and recommend that the stem of Rule 10.1 (and similar consequential changes to Rule 11.1) is amended as follows:

> ***Rule 10.1***
>
> *Any existing land use as at 1 October 2011, <u>that results in a discharge of nitrogen or phosphorus which may enter water</u> in the Nutrient Management Area shown on Map 4, is a permitted activity provided that ….*

Rule 11.1

Any existing land use as at 1 October 2011 that results in a discharge of nitrogen or phosphorus which may enter water, in the Nutrient Management Area shown on Map 4…

551. Independent Irrigators Group (Submitter 92) raises concerns that given that the details of the ASM programme implemented by the landowner or occupier must be approved by the Council, this contradicts the nature of a permitted activity. It is my understanding that the permitted activity rule does not in itself require an approval to be gained from the Council. Rather the system that is implemented by the landowner must be one that has been authorised by the Council (as specified in the definition of the ASM programmes). This, as I understand, is currently the case with authorised burners in the Air Quality chapter of the NRRP. The submitter also has concerns with the approach under Rule 10.1 (and 11.1) which requires individual properties to address cumulative effects of all land uses in the catchment. They consider that tools to calculate effects of land uses on water quality are not sufficiently developed, particularly when considering lag times and correlations to the load limit at a particular point in the river. They therefore consider that the rules should be deleted and that instead nutrient drainage assessments should be relied on in relation to water take and use consents in order to address the effects of land management practises on water quality. In my view, deletion of the rules would not be more effective than the current approach in achieving a number of the Plan's objectives. This is because while consideration of consequential effects of land use intensification enabled by water use will address water quality effects in part, the approach does not provide a regulatory backstop to encourage the creation of headroom in order to allow for more land development. Nor, in my view, is such an approach sufficient to give effect to the requirements in the NPSFM and PRPS as no freshwater quality objectives would be established.

552. In relation to Rule 10.1, Ravensdown Fertiliser Co-operative Ltd (Submitter 102), while seeking retention of the permitted activity status for existing activities, also seeks a review of the overall approach to managing cumulative effects of land use on water quality. They further seek inclusion of an option to adopt a Nutrient Management Plan approach and the use of the Overseer Model as requirements for meeting the permitted activity status. The overall approach to managing cumulative effects of land use on water quality is discussed in other sections of this report. In relation to adopting a Nutrient Management Plan approach and the use of the Overseer Model, I have some concerns about what is specifically sought by the submitter. Firstly, it is difficult to understand how an 'option' to adopt the approach would work. Secondly, if the 'option' effectively allowed for a property owner/occupier to opt out of a collective ASM programme, in my view this is inconsistent with the collective approach of the Plan and would not implement Policy 5.1. Further, unless the option extended to a requirement to meet a particular NDA, I have concerns about its ability to achieve the Plan's water quality objectives, and for the reasons set out earlier, inclusion of an NDA approach at this time is problematic.

553. Related to this, Te Rūnanga o Ngāi Tahu and others (Submitter 116) raise concerns that the rules rely on knowing what land uses were in existence as at 1 October 2011, and note that this could lead to confusion in 2017, as to whether a specific land use is permitted. They seek that reference to 1 October 2011 is removed, or if retained, that a requirement is included to

provide information to the Council on what is occurring within properties as of that date. I note that the proposed LWRP takes a similar approach, in that it requires records of nitrogen loss, calculated using Overseer, to be recorded and provided to the Council on request. I acknowledge that there are potential difficulties with the implementation of Rule 10.2, because if there is no system in place to capture existing Nitrogen and Phosphate levels, it will be difficult to determine if there has been or will be a *'change in land use*'. While the ASM programmes provide for this type of recording to occur, the lead in time for implementing these does not address the submitters' concerns. In my opinion, removing reference in Rule 10.1 to 1 October 2011 will not address this matter. However, an additional standard within the rule requiring this information to be made available to the Council upon request, in my opinion, would be appropriate.

554. I consider that a further consequential change is also required to address this submitter's concerns because of the introductory explanatory note to the rules relating to cumulative effects of land use on water quality. This note states that Rules 10.1, 10.2, 11.1 and 11.2 do not come into effect until 1 January 2017. This could result in a situation where the change recommended to Rule 10.1 would not actually have any effect, with this note stating the rule would not take effect until 1 January 2017.

555. Even if the change I recommend to Rule 10.1(b) is not accepted, I still consider that there is still an issue with the introductory explanatory note. I consider that the purpose of the introductory explanatory note is to signal that there is a transitional period to allow land managers to modify their farming practices outside of the regulatory framework. However, in preparation for that, Rule 10.1 will still need to be complied with during the interim period. In other words, while the rules the note refers to may relate to a later date, they will still have *effect* once the plan is made operative (notwithstanding other potential changes discussed elsewhere in this report).

556. In my view, the date referred to in Rules 10.1 and 11.1 should also be changed, because if the changes recommended below are accepted, then parties may not have been on notice that they had to comply with Rule 10.1 from 1 October 2011 because of the wording of the introductory explanatory note. In my view, the date 1 October 2011 as it appears in both Rule 10.1 and 11.1 should be replaced with "*the date the HWRRP is made operative*". This will avoid the rule having retrospective effect.

557. The recommended wording, shown below, is largely consistent with that used in the LWRP, with dates relevant to the expected timing of this Plan being made operative. I note that this in some way also reflects what is sought by Ravensdown Fertiliser Co-operative Ltd (Submitter 102) as well.

> *~~Rules 10.1, 10.2, 11.1 and 11.2 do not come into effect until 1 January 2017.~~ The <u>following</u> rules are included here now to provide a transitional lead in period to allow land managers to modify their farming practices outside of a regulatory framework.*

Permitted Activities

Rule 10.1

Any existing land use as at ~~1 October 2011~~ the date this Plan is made operative, in the Nutrient Management Area shown on Map 4, is a permitted activity provided that:

(a) on or before 1 January 2017, one of the following is being implemented by the landowner or occupier:

(i) an Industry Certification System; or

(ii) a Catchment Agreement; or

(iii) an Irrigation Scheme Management Plan; or

(iv) a Lifestyle Block Management Plan.

(b) A record of the annual amount of nitrogen and phosphate loss from the land, for the period from 1 July 2012 to 30 June 2013, calculated using the Oveerseer nutrient model is made available to the Council upon request.

558. In addition, I have recommended amendments to the definition of land use change, discussed earlier, such that the 10% increase is explicitly made applicable from the time the Plan is made operative. This amendment should also assist in avoiding the potential confusion identified by Te Rūnanga o Ngāi Tahu and others (Submitter 116).

559. Te Rūnanga o Ngāi Tahu and others (Submitter 116) also seeks that Rule 10.2 is redrafted so that if land use is changed, but discharge of N and P remain the same or reduce, a consent is not required. I note that the recommended amendments to the definition of land use change address this already, in that if the discharge remains the same or reduces, it would not be considered land use change.

560. Independent Irrigators Group (Submitter 92) seeks that Rules 10.2 and 11.2 are amended so as to not apply to land uses in the Waiau River catchment. In my view, this is not appropriate as the application of the rule to the rural area within the entire zone is necessary in order to implement the Plan's policies and objectives in relation to water quality. I note that in any case, as a load limit for the Waiau catchment is not specified in Schedule 1 at this stage, 10.2 (a) which relates to the load limit, will effectively not apply to land uses within the Waiau Catchment. Therefore Rule 11.2 would only be triggered in that catchment where Rule 10.2(b) is not met, being that the land owner or occupier is not implementing one of the ASM programmes. In my view this is entirely appropriate.

561. Water Rights Trust Inc (Submitter 48) seeks that Rule 11.2 is amended so that it is only triggered when both conditions of Rule 10.2 are not met. I recommend that this is rejected as I consider it appropriate that the discretionary rule be triggered by non-compliance with either condition.

14.5.12 Activity Status

562. Several submitters[55] seek that Rules 11.1 and 11.2 are restricted discretionary, rather than discretionary activities. New Zealand Fertiliser Manufacturers' Research Association Inc (Submitter 87) seeks that matters for discretion are restricted to consideration of nutrient loss affecting water quality limits. Ngāi Tahu Property Ltd (Submitter 121) seeks that discretion is restricted to practises that help ensure the summer phosphorus levels in the Hurunui River do not exceed the Schedule 1 threshold. Amuri Irrigation Company Ltd (Submitter 83) seeks that discretion is restricted to the ability of land users to adopt one of the systems, agreements or plans outlined in Rule 10.1.

563. In my view, restricted discretionary activity status is appropriate when the matters that need to be addressed in order to implement the Plan's policies are clear, and address the adverse effects that are expected to arise from such an activity. It is further my view, that when the anticipated or potential effects are quite wide, or when the full scale of potential effects are not clearly known at the time of plan development, a discretionary activity status is more appropriate. In this instance, it is my view that the matter sought to be addressed through this Plan in relation to land use is quite clear, and relates to potential effects on water quality resulting from land use practises that result in the loss of nutrients to water bodies (and its consequential effects on a range of values). While I accept that there are other effects resulting from land use practises, and other activities that affect water quality, it is my view that these are addressed through other planning instruments. As such, it is my opinion that a restricted discretionary status is more appropriate.

564. In my opinion however, the objectives of the Plan would not be achieved if the discretion is limited to considering only summer phosphorus levels. Nor do I consider that it is appropriate to restrict discretion to the adoption of the systems, agreements or plans outlined in Rule 10.1, as if these are implemented, then the activity is permitted under 10.1 in any case. In line with New Zealand Fertiliser Manufacturers' Research Association Inc (Submitter 87) (consideration of nutrient loss affecting water quality limits), my view is that Rules 11.1 and 11.2 should be worded as follows:

> ***Restricted Discretionary Activities***
>
> *Rule 11.1 Any existing land use as at 1 October 2011 <u>that results in a discharge of nitrogen or phosphorus which may enter water</u>, in the Nutrient Management Area shown on Map 4, which does not comply with Rule 10.1 is a <u>restricted</u> discretionary activity.*
>
> *<u>The Canterbury Regional Council will restrict the exercise of its discretion to the following matters:</u>*

[55] New Zealand Fertiliser Manufacturers' Research Association Inc, Ravensdown Fertiliser Co-operative Ltd, Ngāi Tahu Property Ltd and Hurunui Water Project Ltd (Submitters 87, 102, 121 and 127). Amuri Irrigation Company Ltd (Submitter 83) seeks this in relation to Rule 11.1 only.

(i) *Any effects on water quality resulting from nutrient loss, including whether the activity in combination with all other activities will result in the nutrient limits in Schedule 1 being exceeded.*

(ii) *The appropriateness of any methods proposed to address issues managed under the systems, agreements or plans specified in Rule 10.1(a)(i) – (iv).*

(iii) *The appropriateness of any alternative methods proposed to achieve the Plan's policies and objectives."*

Rule 11.2 After 2017, any change in land use, resulting in an increase to a discharge of nitrogen or phosphorous which may enter water, in the Nutrient Management Area shown on Map 4, which does not comply with one or more of the conditions of Rule 10.2 is a restricted discretionary activity.

The Canterbury Regional Council will restrict the exercise of its discretion to the following matters:

(i) *Any effects on water quality resulting from nutrient loss, and the effectiveness of any mitigation measures proposed to reduce nutrient loss.*

(ii) *The appropriateness of any methods proposed to achieve the Plan's policies and objectives, including the implementation of a system, agreement or plan specified in Rule 10.2(b)(i) – (iv).*

(iii) *The appropriateness of any methods proposed to address issues managed under the systems, agreements or plans specified in Rule 10.2(b)(i) – (iv).*

565. A number of submitters[56] seek that the activity status for applications to change land use after 2017, where the nitrogen load is more than 125% or Phosphorus more than 110% of the load limit, be non-complying activity. The lower threshold for phosphorus is sought on the basis that it is the limiting nutrient for periphyton growth. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seek that any activity resulting in the nutrient limits being exceeded should be non-complying rather than discretionary.

566. It is my view that a discretionary (or restricted discretionary) status for applications that exceed the load limit will contribute to the issue raised by Mr Norton, that the consent process will end up being used to resolve the cumulative effects of multiple applications, rather than addressing this at the time of plan-making. This would result in the consent process having to be used to determine when 'enough is enough' in terms of meeting the Plan's policies and objectives. While noting the discussion above in relation to managing one nutrient only, and in relation to the load limits approach generally, it is my view that having a threshold beyond which land use becomes non-complying, and as sought by Hurunui Waiau Zone Committee,

[56] The Hurunui Waiau Zone Committee, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 81, 113, 136 and 139).

Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 81, 113, 136 and 139) is more appropriate. In particular, I consider this better gives effect to Policy A1(b) of the NPSFM, because it provides a more stringent method for avoiding over-allocation. While the submitters have not provided the rationale behind the particular thresholds proposed, it is my view that these provide a good starting point for further consideration. Therefore I recommend the following amendments (amended slightly from the exact wording sought by submitters) to Rules 11.2, and a new Rule 12.1 as follows. Note that for simplicity this wording excludes other recommended changes to Rule 11.2, which are included in **Appendix 2**, and that consequential changes would need to be made to recommended Rule 12.1 if the date in Rule 10.2 is amended:

Rule 11.2

After 2017, any change in land use, resulting in an increase to a discharge of nitrogen or phosphorous which may enter water, in the Nutrient Management Area shown on Map 4, which does not comply with one or more of the conditions of Rule 10.2 is a discretionary activity provided that the Nitrogen Load is less than 125%, and the Phosphorus Load is less than 110%, of that specified in Schedule 1.

Rule 12.1

After 2017, any change in land use, resulting in an increase to a discharge of nitrogen or phosphorus which may enter water, in the Nutrient Management Area shown on Map 4, is a non-complying activity if the Nitrogen Load is at or greater than 125%, and the Phosphorus Load is at or greater than 110%, of that specified in Schedule 1.

14.5.13 Consequential Changes

567. Because I have recommended changes to provisions in the Plan that pertain to the effects of land use on water quality, I consider that consequential changes are also required to the 'Cumulative Effects of Land Use on Water Quality' section in part 1 of the Plan. The recommended changes are shown in **Appendix 2**. I note that a number of submitters have also sought specific wording or general changes to this section of the HWRRP. I recommend that these submissions are accepted in part to the extent that the changes recommended in **Appendix 2** and as a consequence of other recommendations, align with the submitters' requests. Where changes are sought by submitters to Part 1 that do not reflect the changes recommended in this section of the report to the other Plan provisions, I recommend that these are rejected.

568. I also recommend one further change to the first paragraph within this section, which relates to a submission by the New Zealand Pork Industry Board (Submitter 112). While I consider that the wording sought by the submitter generally better reflects the position taken in Plan's provisions, in my view the most appropriate wording is:

> "*To maintain and improve water quality in the Hurunui and Waiau rivers and protect current values, uses and the mauri of the rivers, while ensuring the economic return from land is maximised, land use*

practices that result in the loss of nutrient to water need to be improved in line with best practise."

569. I also note, in relation to this paragraph, that Water Rights Trust Inc (Submitter 48) seeks it is amended to remove the words: "*while ensuring the economic return from land is maximised*" It is my view that the approach taken in the Plan and intended to achieve the purpose of the RMA, and in accord with the visions and principles of the CWMS, is a balancing one where economic development and water quality objectives are sought to be achieved in parallel. It is my view that the paragraph reflects this, and as such I recommend that this submission is rejected.

14.5.14 Risks

570. I note that Mr Brown identifies a number of risks associated with the proposed ASM approach, while also outlining measures in place to manage such risks. It is also clear that the overall vision in the ZIP relies on a mix of statutory and non-statutory measures in order to maintain water quality at or about current state while also allowing for an increase in irrigated area. The evidence of Mr Norton quantifies the capacity for further land use intensification, based on a certain level of nutrient mitigation being undertaken, and is therefore reliant on the mix of statutory and non-statutory measures.

571. I accept that there are risks involved with the proposed approach, which in my view are that:

a. The Plan only requires existing land users to move toward best nutrient management practise, and does not require, through regulation, a specified reduction in nutrient discharge. Should nutrient discharge not be sufficiently reduced through the non-statutory methods, there is a risk that limited headroom will be created for new development, and the development goals of the Plan will not be able to be met within the specified water quality limits. However, in my view, this risk is outweighed by the following:

   i. As outlined by Mr Brown, the ZC has recommended that the CRC implement control strategies to reduce the risk;

   ii. The approach taken by the ZC in the ZIP, and reflected in the HWRRP, has a level of community buy-in that in my view might not occur if a more heavy-handed regulatory approach were to be taken. In particular it would not address the concerns raised by some submitters relating to the effects of further development on their own viability;

   iii. As discussed earlier, further investigation is required before it is able to be determined what an appropriate level of reduction might be, including consideration of the costs of such reduction;

   iv. The approach allows time for non-regulatory methods to be pursued, while further information is gathered, and does not preclude further regulatory measures being undertaken in future. This includes the ability under the RMA for the CRC to undertake reviews of consent, whereby conditions relating to avoiding, remedying or mitigating effects on water quality could be imposed.

b. The 20% increase in the nitrogen load limit provided for under proposed Policy 5.3 until 2017 (and alternate amounts sought by submitters, including through amendments to rules) would allow for some development to occur in the short term, consistent with the economic outcomes sought by the Plan. This would however, allow for a decrease in water quality in the short term, and there are the same risks as those identified in (a) above associated with a reliance on how the load limits are sought to return back to the current levels after 2017. It is my view that the recommended amendments to the rules and policies, in combination, are a more appropriate way to manage the effects of land use intensification on water quality, with the irrigation goals of the HWRRP.

14.6 Relevance to Statutory Documents

572. In my view, the Plan's water quality objectives give effect to Objective A1 of the NPSFM, in that they seek to safeguard those aspects identified within the objectives that are part of its life-supporting capacity, ecosystem processes and indigenous species, through management of the use and development of land, and the effects such use and development has on water quality. In relation to Policy A1 and its requirement to set freshwater quality limits, it is my view that the HWRRP does this through its proposed narrative objectives, and through the recommended quantitative policies. For completeness I note that my view is that the load limit provides a trigger point only, beyond which applications can be considered against the limits in the objectives and policies.

573. It is also my view that the planning framework proposed, including the recommended changes, give effect to Objective 3 of the RPS in that they seek to enable present and future generations to gain cultural, social, recreational, economic, health and other benefits from the water quality in these water bodies while protecting, preserving, safeguarding or maintaining those matters, respectively, which are sought in that objective.

574. With regard to the PRPS, it is my opinion that the Plan's provisions provide for a parallel process approach whereby allocation of water and infrastructure development needs to be considered at the same time as water quality is considered (Objective 7.2.2). Further, the objectives will assist in the overall quality of freshwater in the region being maintained or improved, and the life supporting capacity, ecosystem processes and indigenous species and their associated fresh water ecosystems safeguarded (Objective 7.2.XX), and freshwater being managed in an integrated way within this zone, recognising and managing the impacts of land use on water quality (Objective 7.2.3).

575. With regard to Policy 7.3.6 which relates to fresh water quality, it is my view that the Plan establishes and implements water quality standards for the Hurunui River, that have taken into account the values of the river, community and stockwater drinking supplies and its cultural significance; through managing land uses that may affect water quality. Further, in my view the HWRRP provides a framework for addressing allocation of additional water to ensure this does not lead to the exceedance of water quality standards. In relation to the Waiau catchment and tributaries, and the mouth of the Hurunui River, the Plan also provides a process and direction on setting such standards. It is my view that it would still give effect to the Policy, as the latter

does not include a timeframe for implementation. The Plan's approach also assists in directing how this process is to occur.

576. In my view the Plan also specifically provides a framework for managing changes in land uses in order to avoid, remedy or mitigate adverse effects, particularly cumulative effects, of this change on water quality, in order to maintain the identified water quality standards (Policy 7.3.7). Further, I consider the Plan considers this approach as part of a wider integrated solution to the management of the fresh water bodies within the Zone (Policy 7.3.9) and takes a sufficiently cautious approach based on the technical information available.

15. Infrastructure

15.1 Objective 6

577. Objective 6 in the HWRRP is as follows:

> "***Objective 6***
>
> *Infrastructure for out of stream uses of water, whether for irrigation, hydro-electric power generation or other uses, is developed in a manner which, alongside other economically viable proposals, allows for full irrigation of all economically irrigable land in the Hurunui, Waiau and Jed River catchments, while:*
>
> *(a) protecting areas with high intrinsic, cultural and recreational values;*
> *(b) avoiding areas with significant natural hazards;*
> *(c) addressing demand for community and/or stock drinking water supplies;*
> *(d) maintaining existing geomorphologic and sediment transport processes; and,*
> *(e) maintaining passage for native and introduced fish."*

578. The policies that sit under this objective are:

a. Policies 6.1, 6.2, 6.3 and 6.4 relate to the damming, impoundment of water or development of storage facilities within each of Zones A, B and C. This is discussed in more depth in the '**Large-Scale Storage Location**' section of this report;

b. Policy 6.5 which directs what proposals utilising water from the three rivers must demonstrate. This is discussed in **this section** of the report.

c. Policy 6.6 which addresses transferring water between the Hurunui and Waiau catchments; and Policies 6.10 and 6.11 which address transferring water to augment the Waipara River supplies. This is discussed in **this section** of the report;

d. Policy 6.7 which requires large storage proposal to provide for community and stock drinking water supplies as directed. This is not

discussed further in this report as no submissions were received on this provision;

e. Policy 6.8 which seeks to enable on farm storage provided it meets the specified matters. This is discussed in **this section** of the report; and

f. Policy 6.9 which requires that water permit applications be made concurrently with discharge and land use consents. This is discussed in **this section** of the report.

579. A number of submissions seek that the objective or parts of it are retained. The remainder of the submissions on the objective fall within the following categories, and are discussed in later sections of this report:

a. Submissions seeking redrafting of the stem of the objective;

b. Submissions seeking amendments to parts (a) – (e) of the objective; or

c. Submissions seeking that additional parts are added to the objective.

15.2 Statutory Provisions

580. In my view, the provisions of the NPSFM that are relevant to this section of the HWRRP are Objectives B1 and C1 and Policy C1, which seek to safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water in managing the damming of water and to improve integrated management of fresh water and the use and development of land in whole catchments, through managing freshwater and development in an integrated and sustainable way.

581. It is my view that there are no provisions in the RPS that are directly relevant to the stem of Objective 6, although there are several that relate to protecting or maintaining matters that are reflected in parts (a) – (e) of the objective.

582. Those provisions in the PRPS that I consider to be relevant in Chapter 5 (Land-use and infrastructure) are Objectives 5.2.1, 5.2.2 and Policy 5.3.2 and 5.3.9, which direct that development be located and designed to meet a number of identified matters, including that it maintains the overall quality of the natural environment, encourages sustainable economic development and addresses adverse effects on significant natural and physical resources. This is to be achieved through providing for regionally significant infrastructure, subject to identified matters being addressed. The relevance of this chapter is that regionally significant infrastructure includes renewable energy generation activities of any scale, and established community-scale irrigation and stockwater infrastructure.

583. The provisions in the PRPS that I consider to be relevant in Chapter 7 (Fresh water) are Objectives 7.2.1 and 7.2.3, and Policies 7.3.8, 7.3.9 and 7.3.10. These direct that fresh water is to be sustainably managed in an integrated way to enable enable people and communities to provide for their economic and social well-being through abstracting and/or using water for irrigation, hydroelectricity generation and other economic activities, provided that the identified matters are addressed, and taking into account any net benefits of using water, and water infrastructure, and the significance of those benefits to the Canterbury region. Further, in improving efficiency, the potential for

combined uses of water and energy efficient infrastructure is to be recognised, and the various potential benefits of harvesting and storing surface water is to be recognised.

584. The provisions in the PRPS that I consider to be relevant in Chapter 16 (Energy) are Objectives 16.2.2 and Policies 16.3.3 and 16.3.5, which seek a reliable and resilient generation and supply of energy for the region through regonition of, and provision for the local, regional and national benefits when considering proposed or existing renewable energy generation facilities.

15.3 Stem of Objective 6

585. Ms Shand (Submitter 91) does not support the stem of Objective 6. However, she does not state why this is. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seek that the objective be redrafted so that the matters listed for protection within it (i.e. parts (a) – (e)) are given precedence over the economic aspirations, which they consider would be more consistent with the vision and principles of the CWMS.

586. It is my view that Objective 6 in a general sense, achieves the purpose of the RMA, in that it seeks to provide for the development of infrastructure (a physical resource) for irrigation of land or other uses (enabling provision for economic wellbeing) while identifying what matters must be addressed in order to safeguard the life-supporting capacity of water and ecosystems and avoid, remedy or mitigate adverse effects of the infrastructure on the environment. At a general level, and notwithstanding recommendations I make to the specific wording of the objective, I consider the objective, in combination with policies and rules that are to achieve it, is appropriate to achieve the purpose of the RMA, and do not prioritise economic aspirations in a way that is inconsistent with the RMA.

587. Further, it is my view that the objective gives effect to the NPSFM in that it seeks to improve (when compared to the current planning framework) the integrated management of fresh water and the use and development of land. It does so by providing direction in relation to the development of water-based infrastructure, including that for irrigation of land for further development. I consider the approach is also entirely consistent with the vision and principles of the CWMS, which seeks that the greatest social, economic, recreational and cultural benefits are gained from the water resource, within an environmentally sustainable framework. This places economic aspirations alongside social, recreational and cultural ones, which in my view is reflected in the word "*while*" contained in the objective. Similar comments are also made in a further submission by Dairy NZ Inc (Submitter 134), who opposes the changes sought by Te Rūnanga o Ngāi Tahu and others (Submitter 116), on the basis that in their view, it is appropriate for economic considerations to be on the same par as other well-beings, because this is consistent with the purpose of the RMA.

588. It is also my view that the objective is consistent with the PRPS, because it seeks to manage activities that use water identified in proposed Objective 7.2.1 taking into account the values also identified in that objective. It also manages the use of water in an integrated way between activities. Further, it is my view that the objective specifically recognises the potential for efficiency in infrastructure through combined uses of both water and infrastructure, and the potential benefits of storing surface water, including those relating to

increasing the irrigated land within the zone. With particular regard to hydro-electricity infrastructure, which is regionally significant infrastructure, the objective recognises and provides for such infrastructure, enabling people and communities to provide for their social, economic and cultural well-being and health and safety, to the extent that such infrastructure promotes the sustainable management purpose of the RMA.

589. At a more specific level, some submitters[57] seek that the wording "*allows for full irrigation"* is replaced with "*contributes to irrigation*"*.* This is on the basis that there is no assurance that full irrigation of all economically irrigable land can be achieved without compromising the Plan's environmental objectives, and that it places an onerous requirement for storage and infrastructure to provide for this full irrigation. This is opposed in a further submission by Federated Farmers of New Zealand (Submitter 123), on the basis that "*allows for full"* is in their view, consistent with the CWMS targets and its parallel development philosophy. Meridian Energy Ltd (Submitter 80) seeks that "*allows for full"* is replaced with "*enables"*, because they consider that provision of infrastructure for non-consumptive uses such as hydro-electricity generation should not be required to provide for irrigation, but should be required to be developed in a way that, alongside other proposals, would still enable irrigation of economically irrigable land. Meridian Energy Ltd (Submitter 80) also seeks that the objective not refer to "*all*" economically irrigable land, and Royal Forest and Bird Protection Society (Submitter 136) seeks removal of the word "*full*".

590. Firstly, as discussed elsewhere in this report, I agree that full irrigation of all economically irrigable land may not be achievable, without compromising the environmental bottom lines contained within the HWRRP, as confirmed in the technical s42A reports. However it is my view that the wording of the objective, particularly when also read in conjunction with the other parts of this objective, does not suggest this. Rather, the phrase "*allows for*" relates to the Plan's aims to ensure that development of storage infrastructure is done in such a way that it does not in itself impinge upon the ability to achieve the overall irrigation goal. Therefore the wording "*allows for*" in my view better conveys this than "*contributes to"* or "*enables*". For the same reason I also do not consider that "*all"* should be removed. However I agree that removal of the word "*full*" is more appropriate - it acknowledges that in order to meet the sub-parts of the objective "*full"* irrigation may not be possible, whilst ensuring that each proposal does not preclude the ability for this to occur if the other matters are addressed.

591. Royal Forest and Bird Protection Society (Submitter 136) also seeks the replacement of "*while*" with "*subject to*". It is my view that the word "*while*" requires the following parts to be addressed at the same time, and it is consistent with the use of that term in s5 of the RMA.

592. Amuri Irrigation Company Ltd (Submitter 83) also suggests minor grammatical amendments that I support on the basis that they provide greater clarity.

593. Phoebe Irrigation Ltd (Submitter 86) requests, in relation to this objective, that more research feasibility and consultation should be carried out on water

[57] Water Rights Trust Inc, Whitewater Canoe Club Inc and Whitewater New Zealand Inc, Mr Fox and Fish and Game New Zealand and Ms Sage (Submitters 48, 95, 109, 113 and 139).

storage options. In relation to this matter I note the Plan provides the framework within which water storage options are to be considered, rather than proposing specific options, with research feasibility and consultation provided for in the process under the RMA for consideration of specific applications. It is my view that such research and consultation necessary to establish the proposed planning framework in the HWRRP has been undertaken by the Zone Committee. The submitter also seeks that area-wide storage facilities are given priority in the Plan. It is my view that the wording of Objective 6 provides this through the requirement for infrastructure to be developed in a manner that allows for irrigation of all economically irrigable land, and also through Policies 6.6 and 6.10.

15.4 Amendments to Parts (a) – (e) of Objective 6

Part (a)

594. Meridian Energy Ltd (Submitter 80) seeks that the reference to "*recreational*" values be removed from part (a) of the Objective, and included in another part worded: "*providing support for existing opportunities for recreational activities*", on the basis that recreation is a second order priority under the CWMS. However I note that irrigation and renewable electricity generation, which are sought be enabled by the objective, are also second order priorities. In my view providing "support" for these activities is not sufficient to maintain and enhance recreational amenity values as required under s7(c) of the RMA. I also note Objective 7.2.1 in the PRPS, refers to managing water to provide for activities such as hydro-electricity generation, as well as for recreational values. In my view the changes sought by the submitter would be inconsistent with this.

Part (c)

595. Amuri Irrigation Company Ltd (Submitter 83) seeks that part (c) be amended to refer to "*exploring the prospect of providing for the demand for community and/or stock drinking water supplies using the proposed infrastructure"* on the basis that while the possibility of using infrastructure for community and stock drinking water supplies should be considered in the consenting process, it should not be a positive obligation for them to address this. I note firstly that community supplies and stockwater is a first order priority in the CWMS. I also note that Objective 7.2.1 of the PRPS seeks to manage water resources to provide for this type of infrastructure (and other uses/values) whilst under part (3) specifically requiring that "*any actual or reasonably foreseeable requirements for community and stockwater supplies and customary uses, are provided for".* Within the context of the HWRRP itself, the issue that this matter is seeking to address, is that while such water supplies are usually provided by the district council, who must meet the demand for water supply and subsequent distribution, they have always had to compete for the same water resource as other abstractors. Where storage allows for further irrigation, and therefore more intensive land use, this can in turn lead to greater demand for stock drinking water. Therefore in my view, it is appropriate that storage proposals assist in providing for water for community and stock drinking, firstly because these are first order priorities under the CWMS, and secondly because such proposals may also be creating the extra demand. This does not mean that all infrastructure proposals will have to

supply water for such a purpose, but the objective provides direction that this is something that needs to be addressed.

Parts (d) and (e)

596. Meridian Energy Ltd (Submitter 80) also seeks that the word "*existing*" be removed from part (d) of the objective, while Federated Farmers of New Zealand (Submitter 123), seeks that it is replaced with "*effective*", on the basis that they consider changes to the existing geomorphologic and sediment transport processes are likely from infrastructure. In my view, and reflected by the suggested wording of Federated Farmers of New Zealand, it is the effectiveness of these processes that needs to be maintained in order to meet the purpose of the RMA and give effect to the higher level planning documents. Therefore I support the changes sought by Federated Farmers of New Zealand to part (d).

597. Meridian Energy Ltd (Submitter 80) seeks that part (e), rather than "*maintaining*" refer to "*avoiding or mitigating significant adverse effects on"* passage for native and introduced fish, because maintaining would be too restrictive and thus not enable what is sought under the Plan to be achieved. In my view, as with similar discussions contained elsewhere in this report, I do not consider it appropriate to refer to only "significant" adverse effects. However I consider that other than this, the wording suggested better reflects an effects-based approach to policy-making and therefore in my view is more appropriate.

598. Ngāi Tahu Property Ltd (Submitter 121) seeks that clauses (d) and (e) be amended by adding the words "*in the mainstems of the Hurunui and Waiau Rivers*" to each, on the basis that these matters will not be able to be achieved for storage developed in the Waitohi catchment. It is my view that the other recommended changes go some way to addressing this, and it is therefore not necessary to make the amendments sought by the submitter. While I accept that there may be cost implications in addressing fish passage, for example, in my view this does not in itself provide sufficient rationale to remove this as a consideration. In my view, these matters are necessary considerations in the tributaries in order to meet the purpose of the RMA. This submitter also notes concerns in their submission that different wording is used through the Plan in relation to fish, so I have also recommended changes to (e) to use the same terminology used elsewhere in the Plan.

599. For all of the above reasons I recommend the following wording for parts (d) and (e) of the objective:

> *(d) maintaining ~~existing~~ effective geomorphologic and sediment transport processes; and,*
>
> *~~(e) maintaining~~ avoiding, remedying or mitigating adverse effects on the passage for native ~~and introduced~~ fish, salmon and trout.*

600. Related to this, is the '*Storage and Additional Demand for Water Resources'* sub-section in Part 1 of the Plan. In relation to the sub-section, Ms Eugenie Sage (Submitter 139) seeks that the fourth paragraph in this sub-section is deleted, from the words "in an integrated fashion." This relates to concerns about the effects on water quality that may result from the irrigation goals of the Plan. However, it is important, in my view, to note that the Plan also

contains water quality goals. This paragraph relates to Objective 6, and in my view provides relevant explanation to that objective, without suggesting that the irrigation goals override water quality objectives. Also in relation to this paragraph, Meridian Energy Ltd (Submitter 80) seeks some amendments that I generally consider are appropriate, with the exception of the reference to 'enabling' which is discussed above. I therefore I recommend the following changes:

> *"It is important that water storage infrastructure is developed in an integrated fashion; therefore this Plan requires that all large scale water storage infrastructure is developed with<u>in</u> the <u>overall</u> goal of achieving irrigation of all potentially irrigable land in the Hurunui Waiau Zone..."*

15.5 New Parts to Objective 6

601. Ms Sage (Submitter 139) seeks that "*safeguarding the ecological health of the river systems*" is included in the objective. I note that Objective B1 of the NPSFM requires that the life-supporting capacity, ecosystem process and indigenous species are safeguarded in water management. Similarly, Objective 7.2.1 in the PRPS directs that fresh water management, providing for instream and out of stream uses, is undertaken in a way that safe-guards the life-supporting capacity, ecosystem processes, indigenous species and mauri of the fresh water, which in turn reflects s5(b) of the RMA. It is my view that the objective currently provides for this by addressing (a) areas with high intrinsic and cultural values, (d) geomorphologic and sediment transport processes and (e) passage for native fish. In my view, these also relate to the ecological health of the river systems, and therefore an additional part is not necessary to achieve the purpose of the RMA.

602. Several submitters seek that an additional part be added requiring that the infrastructure does not result in land use change[58] or alternatively a flow regime[59] that will cause periphyton limits (either in relation to the NRRP or the objectives within the HWRRP) and eco-toxicity limits to be breached. This is on the basis that Objective 7.2.2 of the PRPS indicates that further water abstraction and development of water infrastructure should occur in parallel with improvement of water quality and restoration of degraded water quality; and that it would be unsustainable to plan for water storage infrastructure at a scale which exceeds environmental limits for land use.

603. While I accept that this is indicated in the PRPS, I consider there are two important things to note. Firstly, Objective 6 of the HWRRP does not relate to water abstraction but to infrastructure for water use. In my view, the relevant objective in the HWRRP relating to further water abstraction, and therefore that which needs to consider this PRPS objective, is Objective 3, which does address water quality. Secondly, the Plan also seeks to address the effects of land use, including those on water quality that may result from additional land being irrigated. It is my view that the Plan therefore seeks to address storage,

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[58] Water Rights Trust Inc, Department of Conservation, Royal Forest and Bird Protection Society, and Ms Sage (Submitters 48, 90, 136 and 139).

[59] Longbrook Dairy Ltd and T Macfarlane, Mr Fox and Fish and Game New Zealand (Submitters 85, 109 and 113).

abstraction and land use in an integrated manner, because it seeks to generally enable storage and abstraction, while managing environmental effects that may arise. It does this through additional objectives and policies that more specifically deal with the matter (land use) that affects water quality. In my view, it is not more effective and efficient for this matter to be included within this particular objective, because effects on water quality from storage itself are indirect.

604. Meridian Energy Ltd (Submitter 80) seeks that the following part be added to the objective "*recognising the national and regional significance of, and providing for, the development and use of renewable electricity generation*". This is sought on the basis that recognition should be provided to the national and regional significance of this type of infrastructure. I agree that the Plan needs to recognise the national and regional significance of renewable electricity generation, as directed by the NPSREG. However, it is my view that the objective does so already because it seeks to provide for such infrastructure. Therefore the additional sub-clause would, in my view, confuse the objective and in this regard would not be efficient.

605. Amuri Irrigation Company Ltd (Submitter 83) seeks that the following part be added to the objective: "*ensuring that existing, lawfully established, takes, diversions, dams and discharges are not derogated*". I note the comments in the legal submissions that what is sought by the submitter would have the effect of elevating the principle of non-derogation from grant beyond what the Courts have previously recognised, and in particular, that the production of plans and the review of consents under the RMA may result in detraction from existing users of resources under resource consents. It is my view, and as argued by the submitter in relation to other matters, that the RMA is not a no-effects statute, and therefore is not intended to protect the status quo. It is my view that the CWMS represents a shift from effects-based management of individual consents to one of integrated management of zones. Therefore, in my view, in order to achieve the overall integrated outcome sought by the Plan (and ultimately the sustainable management purpose of the RMA) there will necessarily be some effects on existing water users, and the Plan already seeks to minimise these as much as practicable while achieving other goals. The addition of this part, in my view, could potentially lead to the outcome of any effects on existing consents holders having to be avoided, and thus be inconsistent with the purpose of the RMA.

606. Amuri Irrigation Company Ltd (Submitter 83) also seeks the following be added to the objective: "*That the costs of developing new water storage infrastructure are borne by those parties who develop the storage infrastructure".* I note the comments of Amuri Irrigation Company Ltd (Submitter 83) that the Plan is currently silent on who should bear the cost of advancing water storage. In my view, this is appropriate because this is a matter outside the scope of what an RMA Plan can direct.

15.6 Policy 6.5 - Infrastructure Development Plans

607. Under proposed Policy 6.5, any proposal utilising water from the Hurunui, Waiau and Jed river catchments is required to demonstrate how the proposal fits into the zone wide pattern of infrastructure that is designed to optimise the amount of land irrigated. In terms of achieving Objective 6, Policy 6.5 focuses particularly on achieving that part of the objective that aims to optimise the

amount of land that is able to be irrigated by the water resource available. It does so by requiring that individual proposals for using water within the zone address how they 'fit' within this overall goal, ensuring that any proposal does not thwart the ability for the overall irrigation targets of the Plan to be achieved, and to demonstrate how economic and social benefits of water abstraction are maximised. I again note that there are other constraints in the Plan, including those factors outlined in parts (a) – (e) of Objective 6, that may limit the ability for the overall irrigation target to be achieved, but that this particular policy is focussed on ensuring that development of irrigation in itself does not constrain achievement of the target.

608. A number of submitters[60] seek that Policy 6.5(a) is amended to also refer to being "*subject to water quality requirements"* or similar. In my view this is unnecessary as Policy 6.5(b) already refers to consideration of how a proposal will assist in achieving the objectives of the Plan, which include those pertaining to water quality. For completeness I note that these, and other submitters also seeks changes to Policy 6.5(a)(ii)iii that relate to other points raised in their submission and which are discussed in the **'Large Scale Water Storage'** section of this report and therefore not repeated here.

609. Policy 6.5 is to be implemented through Rule 2.4, which provides a restricted discretionary status for damming within Zone B (excluding small-scale damming that is permitted under Rule 1.5). One of the standards and terms that must be met in order for a proposal to be considered as a restricted discretionary activity, is the preparation and lodgement, with the application, of an IDP. In Part 5 of the HWRRP, a comprehensive definition of an IDP is included, which sets out the matters that must be provided for in the IDP.

610. Mr Talbot (Submitter 1) raises concerns that under this policy a significant analysis is required for any proposal to take water, and that this requirement should apply only to large scheme proposals. In this regard I note firstly, that under the definition and requirements for an IDP, it is stated: "*Note: the amount of* detail *provided in a Plan shall correspond to the scale and significance of the activity.*" In my view, this indicates that the level of analysis required for smaller proposals is not expected to be overly complex. However, it is important to remember that the purpose of Policy 6.5 and the IDP requirement is to achieve Objective 6. In my view the IDP requirement is necessary to achieve the outcome sought, being that infrastructure is developed in a manner which is consistent with the overall irrigation target. I also note that an exception to this is provided for small-scale storage under Rule 1.5, on the basis that the effects of such storage is expected to have minimal impact on the overall irrigation target and as such, it is not necessary to achieve the objective, when having regard to the costs.

611. Hurunui Water Project Ltd (Submitter 127), while supporting the integrated approach generally, raises concerns that there is not enough guidance provided on the level of information required in an IDP, particular given that at the time of supplying the IDP (i.e. at the time of consent application) some of the required information may not be available. As with the comments above, in relation to the level of information required, it is my view that it is clear in the Plan that the level of information required will be that with corresponds to

[60] Water Rights Trust Inc, Department of Conservation, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Eugenie Sage (Submitters 48, 90, 113, 136 and 139).

the scale and significance of the activity, and ultimately can only be determined on a case-by-case basis. While I acknowledge the comments made by the submitter in relation to the timing of information, the submitter has not identified what parts of the IDP requirements they consider this would apply to. The matters listed are those that I would generally expect to be known at the time of consent application; however should the submitter shed further light on this, I will consider whether it is appropriate to amend the requirements.

612. Meridian Energy Ltd (Submitter 80) argues that there is no justification for hydro-electricity generation uses to be required to provide for water storage for other uses such as irrigation or community water supplies, nor (consistent with Ngāi Tahu Property Ltd (Submitter 121)) for all proposals to provide for multiple out of stream uses, and seeks amendments to the policy to address these concerns. It is my view that the Policy requires *consideration* of these matters, as do the requirements stipulated for an IDP, and that this is necessary in order to demonstrate how the overarching objective can be met. I also note my earlier comments in relation to addressing demand for community and stock drinking water supplies under part (c) of Objective 6. In some cases, utilising water for multiple out of stream uses may not be necessary in order to achieve the overall irrigation goal; however this must be demonstrated through an IDP and the resource consent process. Further, it is my view that some of the outcomes sought by Policy 6.5 in relation to the environmental effects of the location of storage, and the Plan's 3-zone approach to water storage are relevant to any kind of storage and not specific to storage for irrigation alone. The changes sought by these submitters for parts of the policy to apply to irrigation storage alone, are in my view not the most appropriate way to achieve the Plan's objectives.

613. Related to this, Meridian Energy Ltd (Submitter 80) seeks other amendments to the HWRRP to better recognise and provide for hydro-electricity generation, beyond this being linked only to the '*more water for irrigation*', and tied to water storage.

614. It is my view that the Plan should not preclude the use of water for hydro-electricity generation, in line with the NPSREG, and having particular regard to the benefits to be derived from the use and development of renewable energy (s7(j) of the RMA). However, in my view, recognising and providing for hydro-electricity generation within the HWRRP needs to also be considered in the context of the overall aims of the Plan, particularly those relating to ensuring that infrastructure is developed in such a way that alongside other proposals, allows for full irrigation. It is my view, that in order to meet the Objectives of the Plan, it is necessary to ensure that any hydro-electricity development therefore fits in with, and does not detract from the overall irrigation goals of the Plan. It is my view that one way in which to achieve this goal may be for hydro-electricity generation infrastructure to be developed that also provides for storage for irrigation. However, there may be other proposals that do not provide storage for irrigation, but still 'allow for' irrigation to occur. In my view, what should be avoided, is development of hydro-electricity generation infrastructure that will reduce the water available for other purposes.

615. For example, as noted in the Plan on page 8, ('*How this Plan Responds to the Resource Management Issues and the Hurunui Waiau Zone Implementation Programme'* section), it is stated that: "*Water may be allocated to two or more activities within an allocation block, for example irrigation and hydroelectric*

development with water used for hydro-electric development when it is not required for irrigation". In this way, the Plan provides for hydro-electric development, subject to this complimenting the other goals of the Plan. In my view, this is consistent with the integrated and holistic approach of the CWMS, which seeks to simultaneously achieve a number of goals. I also consider that this approach is consistent with the NPSFM, which seeks to improve the integrated management of the water resource and the use and development of land in whole catchments. In my view, the way that the HWRRP gives effect to this is by providing for a goal relating to the use of water for irrigation, to enable development of land within the catchments covered by this Plan.

616. This is further re-iterated in the PRPS, which seeks that the fresh water resource is managed to enable people and communities to provide for their economic and social well-being through both abstracting water for economic activities, including irrigation and hydroelectricity generation, and for in-stream values, provided that the identified bottom lines are met, including (under Objective 7.2.1(3)) that any actual or reasonably foreseeable requirements for community and stockwater supplies and customary uses, are provided for.

617. In my view, the HWRRP recognises the potential benefits of harvesting and storing surface water for improving irrigation reliability and thereby reducing effects on the surface water body (Policy 7.3.10 of the PRPS). This is reflected in provisions such as the minimum flow changes once storage of more than 20,000,000m^3 is developed (Policies 2.8 and 2.9 and the Table 1 regime). It is also reflected, in my view, in the integrated approach taken to enabling hydro-electricity generation, while seeking that this is also developed in a manner that considers the storage and irrigation goals of the Plan, which in turn assists in meeting the Plan's efficiency objectives. It is my view that the HWRRP effectively represents an "*Integrated solution to fresh water management"* as per Policy 7.3.9 of the PRPS, because it does not seek to address proposals in isolation, but rather considers them in the context of the overall management of the catchment, seeking an integrated and comprehensive solution to all the identified issues. This type of integrated management approach is consistent with the CWMS that all goals be pursued simultaneously.

618. For all of these reasons, it is my view that the changes sought by Meridian Energy Ltd (Submitter 80) to separate out hydro-electricity generation are not appropriate, as they will not assist in achieving the integrated objectives of the Plan.

15.7 Rule 2.4

619. As noted above, Rule 2.4 is intended to implement Policy 6.5, by providing for the damming of more than 20,000m^3 of water (or damming of water that does not meet the conditions of permitted activity Rule 1.5), as a restricted discretionary activity, subject to meeting specified standards and terms.

620. Some submitters[61] seek that a standard and term be added to the rule to require that "*the activity in combination with all other activities shall not result*

[61] Water Rights Trust Inc, Fish and Game New Zealand, Royal Forest and Bird Protection Society and Ms Sage (Submitters 48, 113, 136 and 139)

in the nutrient limits in Schedule 1 being exceeded", and also seek amendments to the related assessment matter, consistent with their submission on Rule 2.3. It is my view that this additional standard and term is not appropriate, for the same reasons that are discussed in relation to Rule 2.3 (refer **'Water Allocation'** section), and to avoid duplication are not repeated here. Again, for the same reasons as those relating to Rule 2.3, I also recommend that the relevant assessment matter (v) under Rule 2.4 is amended to refer to "*any effects on water quality".* This also addresses submissions made by the Hurunui Waiau Zone Committee and Federated Farmers of New Zealand (Submitters 81 and 123) on this rule that are consistent with those made on Rule 2.3.

621. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) seek that standard and term (c), requiring that "*the reliability of supply of downstream takes is no less than before the damming of water"* is deleted. Meridian Energy Ltd (Submitter 80) argues that standards and terms need to be sufficiently clear so that compliance with them is easily determined, rather than being debateable. They consider that effects on the reliability of downstream takes are something that is likely to require investigation and analysis and is not something that is sufficiently clear. On this basis, it is my view that this should be removed as a standard and term of the rule. However, I note that to a degree this reduces certainty for existing consent holders, and therefore, if the standard and term is removed as recommended, I consider that the assessment matter should be strengthened, as follows:

> *(vii) the effects the damming has on any other authorised takes <u>including whether the reliability of supply of downstream takes is less than before the damming of water.</u>*

622. Ms Shand (Submitter 91) considers that the taking of such a sizable dam needs to publicly notified. It is my view that while s77D of the RMA allows for a requirement for public notification to be made under this rule, this is best assessed on a case-by-case basis under s95A-E of the RMA. This is because I do not consider that there are any particular circumstances that justify departing from the assessment under s95A-E of the RMA.

623. Fish and Game New Zealand (Submitter 113) seeks that part (a) of the rule is amended to explicitly exclude the mainstems of the Hurunui and Waiau Rivers, consistent with Policy 6.3(a) and Rule 5.1, and therefore providing greater clarity. In my view, an amendment to provide greater clarity is appropriate, but that the clearest way to do this it to refer specifically to Rule 5.1, as follows:

> *"(a) damming of water within the bed of a surface water body is located in Zone B, on Map 3, <u>unless otherwise specified in Rule 5.1."</u>*

624. Federated Farmers of New Zealand (Submitter 123) seeks that standard and term (d) is deleted, which requires:

> "*where certification under the Building Act is not required the Dam structure shall be designed by or under the guidance of a chartered professional engineer (civil) and once commissioned, shall be certified by a chartered professional engineer (civil)…"*

625. The deletion is sought on the basis that that the submitter questions the necessity of requiring certification if this is not required under the Building Act. It is my understanding that a building consent is required for dams greater

than 3m deep and that store 20,000m^3 or more. As such, this part of the rule will not apply to damming greater than 3m deep and that store more than 20,000m^3 of water, for which such certification will be required under the Building Act. Given that the rule otherwise only applies to damming or water that does not meet the conditions of Rule 1.5, and given that condition (b) of Rule 1.5 is the same as Rule 2.4(a), it is my view that the standard is not necessary. In other words, if the dam is less than 20,000m^3 and not designed as specified under Rule 1.5(b), consent will be required under Rule 2.4 in any case, with assessment matters including the "*effects of flooding, including but not limited to the effects of inundation and dam breach or dam failure"* and "*the geotechnical stability".* In my view these assessment matters are sufficient to address the potential environmental effects of the dam design, and therefore I agree with the Submitter that the standard and term is not necessary and should be deleted.

626. Related to this, Ngāi Tahu Property Ltd (Submitter 121) also seeks that this matter for discretion ((x)) refers to "*stability of the storage structure*", rather than "*the geotechnical stability*". It is my view that this provides clarity, and will also provide greater direction in relation to the matter discussed above.

627. Ngāi Tahu Property Ltd (Submitter 121) seeks that (ix) in the matters for discretion is redrafted to refer to: "*The flow regime downstream of the point of take, including the provision of freshes to scour fine material and periphyton accumulations from the bed, and the passage of floods to transport coarse bedload and remove exotic vegetation from the riverbed*". The current wording is:

> "*The release of flows in order to maintain instream values, including the need for variable flows, and flows that simulate freshes that are sufficient to remove vegetation colonising gravel bars, nuisance periphyton, and maintain geomorphological processes."*

628. I note firstly, that as this is a matter for discretion, there is no requirement to provide for a release of flows, and therefore a proposal that does not release water is not precluded; rather the matter for discretion allows for consideration of how a proposal will maintain flows, consistent with the policies of the Plan, such as Policy 2.5. In my view the current wording more appropriately ensures the Plan's policies are met, as they are clearer than the proposed amendments.

629. Te Rūnanga o Ngāi Tahu and others (Submitter 116) support Rule 2.4 as it pertains to large scale water storage forming part of an integrated solution, but raises concerns that the rule does not take into account medium sized paddock ponds or dams located outside of riverbeds, which can assist in encouraging the conversion of border dyke irrigation to spray irrigation, through providing a storage space for irrigators' allocated water which is utilised over a longer period of time. They also question the necessity for medium sized ponds to provide IDPs. They seek changes to Rule 2.4 (or an additional rule) to enable out of river storage ponds as a restricted discretionary activity, and seek that IDPs and consideration of whether a pond or dam addressees Policy 6.5 should only be required where the pond or dam is part of an integrated solution to enable 100,000ha of land to be irrigated.

630. It is my understanding that Rule 2.4 already allows for out of river storage ponds as a restricted discretionary activity, provided that they are located in Zone B. The reason for excluding larger-scale storage structures altogether in Zone A, and in considering them as a non-complying activity in Zone C, is

discussed elsewhere. I also note that an out-of-stream dam will also require consent to take and store water, or for an existing take, may necessitate a change of conditions to allow for storage. In my view this is appropriate. In relation to the requirement to provide an IDP, as noted above, my view is that this is appropriate, and that in order to achieve the irrigation goals of the Plan, it is important that all storage infrastructure is considered in relation to this goal; otherwise water taken and stored without such consideration could limit the ability for the integrated solution to be achieved.

631. In relation to activity status, Ms Eugenie Sage (Submitter 139) seeks that activities which do not comply with the performance standards of Rule 2.4 are prohibited or non-complying. It is my understanding that activities which do not comply with the standards and terms of Rule 2.4 are already non-complying under Rule 4.2, and in my view this activity status is appropriate.

632. Related to the above discussion, Mr Michael Barton (Submitter 78) seeks that allowance be made to collect and store water in the Waikari area, where water can harvested in winter months from streams that run dry in summer. The Submitters seeks this on a case by case basis and consider that collecting flood run-off is the most sustainable form of collecting water. It is my view that no changes are required to the HWRRP in this regard, as the Plan provides a framework for consideration of the type of storage discussed in the submission, on a case-by-case basis (for larger scale storage facilities of over 20,000m^3) within Zone B, within which the Waikari area is located, under Rule 2.4. I do note however, that the Waikari River A Block is fully allocated and no B or C Block is specified for this river, making the taking of water a non-complying activity (refer to **Water Allocation section** of this report in relation to wider discussion on rivers where no allocation blocks are specified.)

15.8 Larger Diversions

633. Related to this matter, is that proposed Rule 2.1 provides for taking, diverting, using and discharging of surface water for any non-consumptive use, as a restricted discretionary activity, and subject to compliance with a number of conditions. Department of Conservation and Federated Farmers of New Zealand (Submitters 90 and 123) support this rule. Ms Sage (Submitter 139) seeks that this rule is amended to exclude hydro generation from the definition of a "non-consumptive" activity, and as such, exclude it from this rule, on the basis that hydro generation and water storage behind a dam, while being a non-consumptive use, can cause significant adverse effects. The submitter also seeks that the activity status for this rule be fully discretionary, on the basis that the list of matters for discretion is too narrow and excludes matters such as landscape effects. Fish and Game New Zealand (Submitter 113) considers that the rule lacks sufficient measures to address the maintenance of matters identified in Policy 3.6, and seeks additional standards and terms requiring maintenance of a number of identified matters.

634. While I accept that hydro generation and water storage behind a dam could have significant adverse effects, I note that this rule does not provide for the damming of water, which is dealt with under other rules in the HWRRP. It is also my view that while an activity *could* have significant adverse effects, the consent process allows for consideration of such effects, how they are to be

avoided, remedied or mitigated, and ultimately whether the grant of a consent with such effects, on balance, will meet the purpose of the RMA. With respect to the activity status, it is my opinion that a restricted discretionary status is appropriate where the effects of an activity (or the effects that the rule is trying to manage) are sufficiently known so that the council's assessment can be focussed on these matters, providing a greater level of certainty for applicants in relation to what matters the council is trying to consider. Further, where the effects of an activity are not well-known, then it may be appropriate to either extend the list of matters to which the Council's discretion is restricted, or otherwise to change the activity status to discretionary. In the case of this rule, as currently drafted, the focus is on the need for the water; effects on water quality; effects on the flow and allocation regime of the HWRRP; effects on instream values; and effects on other lawfully established takes. It is my view that these matters sufficiently address the type of effects that could arise from such an activity, and that the rule is trying to manage and therefore I consider that the activity status is appropriate.

635. It is also my view that the additional standards and terms sought by Fish and Game New Zealand (Submitter 113) are not appropriate. This is because, as standards and terms define the activity status, they must be certain and measurable. Those proposed by the submitter in my opinion largely require an evaluative judgement to be made, based on an assessment of various effects. For example, whether the health and safety of people and communities using the river will be maintained. In this instance, the assessment matters for Rule 2.1 already address the matters in Policy 3.6, and therefore a proposal would be assessed against this policy. In my view this is more appropriate than these being used as matters that define activity status.

15.9 Policy 6.6

636. Policy 6.6 is:

> "*To provide for the transfer of water from the Hurunui to the Waiau catchment or the Waiau to the Hurunui catchment, provided:*
>
> *(a) it occurs in a culturally sensitive manner which aligns with the values of Ngāi Tahu and local Rununga;*
>
> *(b) the point of take, discharge and the entire length of the transfer infrastructure is in the parts of Hurunui and Waiau River Catchment shown as Zone B – Infrastructure Development Areas, on Map 3; and,*
>
> *(c) Water is provided in accordance with the A or B Allocation Blocks identified in Environmental Flow and Allocation Regime in Table 1.*

637. Department of Conservation, Fish and Game New Zealand Te Rūnanga o Ngāi Tahu and others (Submitters 90, 113 and 116) generally support the policy. In my view the policy is an appropriate way to achieve the Objectives of the HWRRP. Phoebe Irrigation Ltd (Submitter 86), seeks that part (a) of the policy is removed, questioning the cultural history that may preclude water

transfer between catchments. In this regard I note that comments in the ZIP (p. 20) outline caution by Ngāi Tahu of the 'mixing' of waters. As in the ZIP, the HWRRP acknowledges such concerns and provides for Tangata Whenua to be involved in discussions and decisions on any potential mixing of water. It is my view that the Policy is necessary to ensure that the allocation of water and development of infrastructure for out of stream uses of water, still protects areas with cultural values (Objective 6, part (a)), and protects the mauri of waterbodies (Objective 3, part (a)), and on this basis should be retained.

15.10 Policies 6.10 and 6.11

638. These policies are :

> *Policy 6.10*
>
> *Any proposal for water storage greater than 20,000,000m^3 within the Hurunui Catchment shall consider making water available to either:*
>
> > *increase the flow in the Waipara River to offset the ecological effects of current abstraction on that River; or,*
> >
> > *provide an alternative source of water to existing abstractors, taking from the Waipara catchment to allow for the minimum flow in the Waipara River to be increased while maintaining a reliable supply to those abstractors.*
>
> *Policy 6.11*
>
> *Notwithstanding Policy 6.10, any resource consent application to transfer water between the Hurunui and Waiau Catchments or from the Hurunui and Waiau Catchments to another catchment should not be granted if it results in insufficient water remaining instream to meet the reasonable out of stream needs of land owners within the catchment from which the water is taken.*

639. Both policies are supported by Department of Conservation (Submitter 90). Fish and Game New Zealand (Submitter 113) supports Policy 6.10. Ms Eugenie Sage (Submitter 139) seeks that Policy 6.10(a) is deleted, on the basis that the transfer of water between catchments has the potential for significant ecological effects, and considers that over allocation in the Waipara River should be addressed by reducing abstraction in that zone. I note that the Policy requires only consideration of making water available to the Waipara River catchment; it does not require it. Any application to transfer water would need to be considered alongside other policies in the Plan, including those that seek to address the ecological effects of water abstraction. In my view the Policy, in combination with other policies, is appropriate to achieve the overall objectives of the Plan.

640. Federated Farmers of New Zealand (Submitter 123) supports Policy 6.11. Amuri Irrigation Company Ltd (Submitter 83) seeks amendments to the policy to provide greater clarity and I generally agree with these changes, although not all of them, with those recommended shown in **Appendix 2**. The submitter also seeks that a definition is included in the HWRRP for the

'reasonable out of stream needs'. While I accept the submitter's concerns that what is 'reasonable' and 'needed' depends on a range of matters, in my view, this is the sort of broad overall judgement that is more appropriately made when assessing a particular application, rather than trying to define this within the Plan itself.

15.11 Policy 6.8 and Irrigable Land Area

641. Direct Project Management Ltd (Submitter 120) raises concerns that the amount of land (100,000ha) stated in the HWRRP as potentially irrigable is not accurate, and that there is no link in the Plan between this land area, and what can actually be irrigated while sustaining environmental values. The submitter also seeks that the irrigable land areas be broken down within the Plan into sub-catchment areas. While I appreciate the Submitter's desire for more specific information to be included in the HWRRP, in my view, it is important to remember that the Plan provides for a framework within which decision-making is to occur on matters such as the allocation of water. In this regard it identifies the relevant resource management issues that the Plan seeks to address (of relevance here, the potential for economic development through additional irrigation, and the adverse effects of such irrigation) and identifies objectives, policies and rules to address this. In this regard, the Plan recognises and provides for economic development, while seeking to ensure that this occurs in a way that protects other values, such as environmental and cultural values. In my view, more specific information about the form of economic development is not necessary within this Plan, and in my view is not necessary to assist the CRC in carrying out its functions under the RMA.

642. I also note in relation to the specified target of 100,000ha, that this is the figure used in the ZIP, and represents an estimate of the land area the ZC considered was irrigable land, based on the information provided to them[62]. The HWRRP therefore reflects the ZIP, and given the reference to 100,000ha is used in the Plan to provide an estimate (rather than a fixed amount), I do not consider it necessary or appropriate to amend this estimate. While I also agree that it is not currently known how much of this land area can actually be irrigated while sustaining environmental values, it is my view that the Plan does not need to reconcile this; rather, to achieve the purpose of the RMA, it needs to provide an appropriate framework within which to make decisions on the water resource, with these matters considered at a more specific level through future consenting processes.

643. Ms Palmer (Submitter 114) seeks, in relation to Policy 6.8, that a maximum area of irrigable land be set in the Plan. It is my view that it is more appropriate for the Plan to provide a framework within which the effects of irrigation are addressed, rather than setting limits on irrigation itself. In my view the relief sought by the submitter would not better achieve the objectives of the HWRRP, nor ultimately, the purpose of the RMA.

644. Similar to this, Mr Snowdon (Submitter 115) opposes Part (c) of Policy 6.8, which seeks to enable development of on farm storage of water for irrigation

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[62] Riley Consultants Ltd (2010). *Canterbury Water Management Strategy: North Canterbury Storage Options*. Report No. 09821-A, 19 July 2010; and Hurunui Water Project. (2011) *Staged approach to irrigation in the Hurunui Waiau Zone.* 30 March 2011.

which will assist in irrigating up to 100,000ha of land within the Zone, on the basis that the Plan should not include a goal for irrigating a particular amount of land. Ms Moore (Submitter 128) also raises concerns that the irrigable area target is too high, and considers it unachievable if the Plan's water quality targets are to be met, seeking a more sustainable target. In this regard I note that the Policy, and related explanations in the Plan, refers to helping to achieve this target, rather than explicitly seeking to achieve such a target. In my view the Policy is appropriate to achieve the development aims of the Plan, while noting that any proposal would need to be weighed against other policies and objectives of the Plan. In other words, the wording of the proposed policy in itself does not provide a blanket right for this level of irrigation to occur without consideration of other factors.

15.12 Policy 6.9 - Concurrent Applications

645. Proposed Policy 6.9 requires that all new applications for water permits be concurrently applied for alongside any discharge or land use consents required, in order to enable consideration of the full range of effects of a proposed development. Ms Palmer, Mr Snowdon and Te Rūnanga o Ngāi Tahu and others (Submitters 114, 115 and 116) support the policy on the basis that it is essential to consider the full implications of any activity. Water Rights Trust Inc, Department of Conservation, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 48, 90, 113 and 136) support the policy but seek that it use the word "shall" rather than "should" in order to strengthen the policy.

646. Some submitters[63] however, seek the deletion of Policy 6.9, because the costs associated in applying for all consents make doing so impractical and cost prohibitive. This is on the basis that "critical" resource consents, for example for the taking and using of water, need to be applied for and gained first, to ensure water is available. Other related consents can then be applied for once the outcome of these critical consents is known, without unnecessary time and cost being put into these latter consents up front.

647. As these submitters note, s91 of RMA provides for a consent authority to determine not to proceed with notification or hearing of an application if it considers on reasonable grounds that other resource consents will also be required for the proposal and that it is appropriate, in order to better understand the proposal, that applications be made for other resource consents before proceeding further.

648. It is my view that there is a distinction between needing to consider <u>all</u> consents that a proposal might need, in comparison to those that need to be considered together in order to fully understand the effects of the overall proposal in the consideration of a consent. It is my view that s91 provides sufficient discretion to the consent authority to ensure the latter, and to address the concerns of submitters seeking that the full implications of an activity be considered. It is my view that the proposed Policy goes beyond this, and in doing so, hinders the achievement of the overarching Objective 6 This is because the processing of one or more consents could be held up by

[63] Meridian Energy Ltd, Ravensdown Fertiliser Co-operative Ltd, Ngāi Tahu Property Ltd and Hurunui Water Project Ltd (Submitters 80, 102, 121 and 127).

a requirement to obtain a further consent, when the latter does not assist further in fully understanding the effects of the former. It is therefore my view that Policy 6 should be deleted. However I emphasise that this is on the basis that under s91, the Council retains the discretion to require that additional consent applications be made, where it is appropriate from the point of view of better understanding that overall proposal. It is my view that if this discretion is used appropriately, the concerns of the submitters who support the policy, should not arise.

16. Large-Scale Storage Location

16.1 Development Zones

649. In order to promote the sustainable management of rivers, streams and groundwater in the Hurunui, Waiau and Jed catchments, the HWRRP establishes a planning framework to allow for additional water to be abstracted to promote economic development, while addressing environmental, cultural and recreational matters that such abstraction can affect. As part of this management framework, the area covered by the Plan has been divided into three zones – Zone A, Zone B and Zone C.

650. **Zone B** are those areas identified as suitable for the development of water storage infrastructure. Under Rule 1.5, small-scale damming, subject to a number of conditions, is **permitted** in this zone, and under Rule 2.4, damming that does not meet these conditions (including being more than 20,000m^3) is a **restricted discretionary** activity.

651. **Zone A** are identified as areas where water storage should not be progressed. Under Rule 5.1, damming or impoundment of water in: the mainstem of the Waiau River below the Hope River confluence; the mainstem of the Hurunui River below the confluence of the North and South Branch; or within the tributaries of the Hurunui and Waiau River that are located within Zone A, are **prohibited**. As such, no consent can be applied for, for damming or impoundment of water in these areas.

652. The third zone, **Zone C**, are areas where the Plan states that only limited investigations have been carried out as to whether water storage infrastructure is appropriate. Damming within this zone is a **non-complying** activity under either Rule 4.1, 4.2 or 4.3.

653. One of the provisions in the HWRRP that has drawn the most comments from submitters, is the inclusion of Lake Sumner and the South Branch of the Hurunui River within Zone C, and consequently the non-complying, rather than prohibited activity status for damming of these areas.

654. Given the volume of submissions, individual references to all submitters who commented on this matter are not made in this section of the report.

655. The background to this issue, which assists in understanding the context of the HWRRP provisions, is provided in Mr Parrish's evidence.

16.2 Relevant Statutory Provisions

656. The main provision within the NPSFM that I consider to be relevant is Obejctive B1, which seeks to safeguard the life-supporting capacity, ecosystem processes and indigenous species in sustainably managing the damming, of fresh water.

657. Within the RPS, I consider Obejctive 1 and Policy 1 in Chapter 10 to be relevant. These direct that the land use and development within the beds and margins of lakes and rivers, protects, and where appropriate, enhances a number of listed matters, with such land use and development avoiding causing significant adverse effects on listed conservation values.

658. It is my view that the provisions of the PRPS that are relevant to large-scale storage are Objectives 7.2.1, 7.2.XX, and Policies 7.3.1, 7.3.2 and 7.3.9. In particular, Policy 7.3.1 seeks to identify the natural character values of fresh water bodies and their margins and to preserve these values where there is a high state of natural character, unless modification of these values is provided for as part of an integrated solution to water management in a catchment in accordance with Policy 7.3.9. I also note, in terms of the principle reasons and explanation to this Policy that it recognises that a fundamental part of achieving the purpose of the RMA is that water is made available for abstraction for irrigation, hydro-electricity generation and other activities, and that it is likely that some catchments with relatively high natural character values will need to be modified through large-scale abstraction, diversion, damming or storage of water. The explanation states that Policy 7.3.1 recognises and provides for these activities to occur in areas assessed and identified as appropriate for modification for this purpose, as part of a broad overall judgement and when part of an integrated solution to fresh water management in a catchment, (as set out in Policy 7.3.9), with any adverse effects of the activity on natural character values needing to be remedied or mitigated as part of that integrated solution.

659. I also note that Policy 7.3.2 directs that to maintain the natural character of braided rivers, damming on the mainstem of the Waiau and Hurunui Rivers is to be prohibited, and damming of other (unspecified) braided rivers is not to reduce their braided character. In respect to natural lakes, the Policy seeks to maintain their natural character through 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. Of particular note in the methods to Policy 7.3.2, it is stated that the Council will set objectives, policies and methods in regional plans to **prohibit** damming on the main stem of braided rivers listed within the policy, and **manage** damming in relation to other braided rivers and natural lake outlets.

16.3 Relevant HWRRP Provisions

660. There are a number of provisions within the HWRRP that relate to the three identified zones, as well as to water storage in these zones. This includes:

    a. A general discussion of the issue (discussion on pages 2-3 under '*The Resource Management Issues'* and on page 3 - Issue 5) of providing for further irrigation, with such irrigation requiring storage, and the

effects of the location of the storage. This discussion reflects the proposed policy position within the HWRRP;

b. A discussion within '*The Vision for Sustainable Management of Water Resources in the* Hurunui *and Waiau Zone*' section (particularly page 5) which sets out the position of the ZC and the reason for their recommendations within the wider planning context;

c. A discussion within the '*How this Plan Responds to the Resource* Management *Issues and the Hurunui Waiau Zone Implementation Programme'*, particularly in the '*Storage and Additional Demand for Water -Resources*' sub-section (pages 9-10);

d. Objective 6: "*Infrastructure for out of stream uses of water, whether for irrigation, hydro-electric generation or other uses is developed in a manner which, alongside other economically viable proposals, allows for full irrigation of all economically irrigable land in the Hurunui, Waiau and Jed River catchments, while:*

i. *protecting areas with high intrinsic, cultural and recreational values;*

ii. avoiding *areas with significant natural hazards;*

iii. addressing *demand for community and/or stock drinking water supplies;*

iv. maintaining *existing geomorphologic and sediment transport processes; and,*

v. maintaining *passage for native and introduced fish.*

e. Policy 6.1 which prohibits damming or impoundment of water in the Zone A areas;

f. Policy 6.2 which seeks to enable development of storage facilities within Zone B areas, subject to a number listed factors;

g. Policy 6.3 which seeks to enable damming of water within Zone C areas, subject to a number of factors, and Policy 6.4 that directs that damming in Zone C is to be avoided until 2 years after the Plan is notified and once it has been demonstrated that opportunities for water storage within Zone B are not able to proceed;

h. Rule 1.5 which provides for a permitted activity status for small-scale damming of water within Zone B, subject to a number of conditions;

i. Rule 2.4 which provides for damming within Zone B that does not meet the permitted activity conditions of Rule 1.5 (including where the damming involves more than 20,000m^3 of water) as a restricted discretionary activity, subject to compliance with standards and terms;

j. Rule 4.1 which provides for damming within Zone C within the bed of a river and greater than 20,000m^3 as a non-complying activity;

k. Rule 4.2 which provides for damming of surface water not otherwise specified as a permitted, restricted discretionary, or prohibited activity as a non-complying activity;

l. Rule 5.1 which specifies, as a prohibited activity, the damming or impoundment of water in the mainstem of the Waiau River below the hope River confluence; the mainstem of the Hurunui River below the confluence of the North and South Branch; and within the tributaries of the Hurunui and Waiau Rivers located in Zone A;

m. Also related is the proposed definition of 'mainstem', which refers to that used in the PRPS.

16.4 Discussion

661. I note the extensive background to this matter that is set out in the evidence of Mr Parrish. As outlined in his evidence, and within the ZIP, the ZC has given a lot of consideration to the provision of "more water", including consideration of various options for water storage. This has included consideration of the financial viability of options, with recognition that a preferred option from the point of view of meeting CWMS targets may never come to fruition if they are not economically feasible. It is my opinion that the ZIP is clear that the ZC supports the Waitohi River catchment (located in Zone B in the HWRRP) as a location for major water storage in the Hurunui catchment. They consider that proposals for a dam on the South Branch of the Hurunui River and a weir on Lake Sumner (located in Zone C), should be deferred until a Waitohi Option is shown not to be economically viable or for two years, in order to provide a "Plan B" for major water storage in the Hurunui catchment. This option would still however, have to address environmental, recreational and cultural matters (Refer ZIP, p. 42).

662. This position is reflected in the proposed Plan provisions, with Zone B (the Waitohi option) providing for large-scale water storage (through damming), as a restricted discretionary activity. Damming of Lake Sumner and the South Branch is proposed to be non-complying under the HWRRP. In addition, a proposal for this area would need to be considered against the objectives and policies of the HWRRP, including Policies 6.3 and 6.4. It is my view that the HWRRP therefore sets a very high policy threshold for any proposal for water storage in the South Branch and Lake Summer area to pass, because of the number of factors in Policy 6.3 that must be addressed, as well as the requirement under Policy 6.4 that water storage within Zone B areas must first be proven unable to proceed.

663. A large number of submitters seek that damming or water storage in the South Branch and Lake Summer is a prohibited activity, as it is in the identified Zone A areas, or that Zone C is removed altogether and amalgamated into Zone A. Several submitters refer to 'protecting' the Zone C areas, although it is not entirely clear if the 'protection' sought is effectively a prohibited activity status (as opposed to protection of values through a non-complying activity status and identification of values within plan policies). Conversely, some submitters seek that damming or water storage in Zone C areas (including the South Branch and Lake Summer) is made a discretionary activity. There are a number of submissions on the other provisions outlined above, but in my view they largely relate to this overall issue. For this reason, the following section of this report focuses on the key issue rather than commenting on the submission points made on all the relevant provisions.

664. Graham Clark (Submitter 76) also seeks that dams should not be allowed where there are active faultlines. I note that within Zone A, dams are prohibited, and that consent is required for larger dams in Zones B and C. It is my view that consideration of the potential adverse effects resulting from locating a dam near an active faultline is adequately addressed in the Plan, as in my view these effects would form part of the consideration of any consent.

665. As discussed in the **'Infrastructure'** section of this report, it is my view that Objective 6 is, in a general sense, an appropriate way to meet the purpose of the RMA, as it provides for the development of infrastructure (a physical resource) for irrigation of land (enabling provision for economic wellbeing) while identifying what matters must be addressed in order to safeguard the life-supporting capacity of water and ecosystems and avoid, remedy or mitigate adverse effects of the infrastructure on the environment. As a result of submissions, I have recommended a number of minor changes to the objective in order to refine and clarify it that have been discussed earlier.

666. It is also my view that Policies 6.1 – 6.4, in combination with the related rules (discussed further below), are the most appropriate way to achieve the objective because the hierarchy of zones applied are an effective way, in my opinion, to manage the location of storage in recognition of the different values in the different zones.

667. Further, it is my view that the approach proposed in the HWRRP gives effect to Objective B1 of the NPSFM, because the policy framework identifies matters, related to the life-supporting capacity, ecosystem processes and indigenous species, that need to be safeguarded (through preservation or maintenance) by any damming proposal. In terms of the RPS, it is my view that the proposed provisions in the HWRRP give effect to Policy 1(a) and Objective 1, in that they seek to protect the values identified in those provisions through establishing a planning framework for consideration of the potential significant adverse effects on these values.

668. As noted earlier, it is my view that a non-complying activity status is appropriate for an activity that is not generally anticipated by the Plan, such as one that is considered unlikely to meet the plan's policy outcomes or one that could have significant adverse effects. In my opinion, the damming or large-scale water storage in the South Branch and Lake Summer would fall within this category, as is reflected in the extensive planning history outlined in Mr Parrish's evidence. In my view, it is also important to note the hierarchy proposed in the Plan for development in each zone; with large-scale development in Zone B – the 'Infrastructure Development' area – proposed as a restricted discretionary activity, and that in Zone A being entirely prohibited. It is my view that a discretionary activity for this type of development in Zone C would remove the hierarchy between Zones B and C, which in my view is not an appropriate way to implement the Plan's policies and achieve its objectives.

669. I have also considered whether it is more appropriate than the proposed non-complying activity status, for the South Branch and Lake Summer areas to be included within Zone A, as sought by a number of submitters, whereby damming and large-scale water storage would be prohibited. In particular, I am conscious that under the recommendations made by the Special Tribunal on the WCO, this activity would have been prohibited from Lake Sumner. I do note however, that the Special Tribunal did not include the South Branch in

their recommendation for the WCO, and under the operative NRRP, this activity is non-complying not prohibited, from the South Branch. It is therefore my view that departing from these earlier determinations, given the evidence that these determinations were based on, should not be taken lightly. Further, the PRPS contains strong directives in relation to damming provisions.

670. Notwithstanding this, in my view it is important to note that the context within which decision-making on this matter is to be made, has altered from that associated with the previous decisions, and that this is reflected in the aims that are being sought in this Plan. In my view, the introduction of the CWMS, and the requirement under the ECan Act to have particular regard to its visions and principles, have altered the decision making environment. In particular, the approach in the CWMS, including the establishment and responsibilities of Zone Committees, is about collaboration between different users and stakeholders. It is my view that this approach reflects a new way of enabling people and communities to provide for their wellbeing in relation to management of water resources within the region. Rather than focusing on one outcome or particular interest, collaboration is therefore sought between all parties on the simultaneous achievement of all outcomes. In my view, it is therefore important to note that the position reached by the ZC and outlined in the ZIP, represents the balancing approach taken by members of that committee, towards achieving the best outcomes overall to deliver all the CWMS targets in the zone. In this regard, leaving the Lake Sumner and South Branch option 'on the table', but only as a back-up option and subject to it being demonstrated that opportunities for water storage within Zone B are not able to proceed, represents a balance between the environmental, cultural and recreational outcomes sought by the CWMS, represented in the non-complying status and high policy thresholds, and the economic outcomes sought from the provision of more water.

671. In my view, the approach taken by the CWMS itself, and by the ZC is reflective of Policy 7.3.1 and 7.3.9 in the PRPS. This is because the ZC, in coming to their recommendations, have in my view, made a broad overall judgement considering the duty to recognise and protect the preservation of the natural character of lakes and rivers, whilst balancing this with making further water available for abstraction. Further, it is my view that the HWRRP in itself is an integrated solution to water management (refer proposed Policy 7.3.9), intended to provide a comprehensive solution to water issues within the three catchments it covers, and that in combination with the ZIP, it addresses all those matters set out in the **Appendix 3** of the PRPS, as directed under Policy 7.3.9.

672. It is also important, in my view, to remember that changes made to the HWRRP can also have consequential effects on the overall vision and outcomes sought in the ZIP, and consequentially the delivery of the CWMS itself.

673. In my opinion, the overall approach in the HWRRP in relation to large-scale storage and damming is also consistent with the PRPS, (except in relation to one area which I discuss further below). This is because the definition of main stem in the PRPS (and also in the HWRRP which refers to the PRPS definition) is:

> "*In relation to braided rivers refers to* ***that stem of the river*** *which flows to the sea, and applies from the source of that stem to the sea, but excludes any tributary"* (Emphasis added).

674. While disputed by some submitters, it is my understanding that the 'stem' that flows from the source to the sea is the North Branch, and as noted in legal submissions, the South Branch of the Hurunui River, with a smaller (lesser flow) than the North Branch, is considered to be a tributary. As such, the South Branch would fall within Policy 7.3.2(2) of the PRPS which directs that the damming of such a tributary does not reduce the braided character of the mainstem of the river. It is my view that part (e) of Policy 6.3 is consistent with this, requiring that the braided character of rivers within the Hurunui and Waiau catchments is preserved.

675. I note that a number of submitters also seek that the definition of 'mainstem' is amended to use the wording within the PRPS, rather than referring to the definition in the latter plan, on the basis that the definition should be defined within the HWRRP itself, rather than referring to another plan which may change. It is my view that this is appropriate, and therefore I recommend that the definition is amended as follows:

> "~~*Has the same meaning as that in the Proposed Canterbury Regional Policy Statement 2011*~~ *In relation to braided rivers refers to that stem of the river which flows to the sea, and applies from the source of that stem to the sea, but excludes any tributary."*

676. Under Policy 7.3.2(3), it would be a requirement to limit the use of Lake Sumner for water storage, to within its natural operating range. At present this does not appear to be directly addressed in the HWRRP[64], although I note that it is something that would likely be considered in a consent process anyway.

677. The one area where I consider the HWRRP is inconsistent with the PRPS is that as currently drafted, proposed Rule 5.1(b) of the HWRRP lists, as a prohibited activity, the damming or impoundment of water in "*the mainstem of the Hurunui* River *below the confluence of the North and South Branch".* In my view, this conflicts with the direction in the PRPS because this excludes that part of the mainstem (North Branch) above the confluence to the Lake Sumner outlet, and those parts of the river above the inlet to the lake that under the methods to Policy 7.3.2(1) in the PRPS would be required to be prohibited.

678. I note that in effect, the current wording is supported by Hurunui Water Project (Submitter 127) who seeks that prohibiting damming of the mainstem of the Hurunui River is removed, or that in relation to Policy 6.1, a clear definition of the mainstem being below the confluence of the South Branch is included. I also note that Mr Mark Harrison (Submitter 37) supports a dam on the main Hurunui River. It is my view, given the definition of 'mainstem' that Rule 5.1(b) does not give effect to Policy 6.1, because the policy refers to the mainstem, while the rule only refers to parts of the mainstem.

679. Related to this, Department of Conservation (Submitter 90) seeks that Policy 6.3(a), is amended as follows:

[64] My understanding of the rules is that the damming of Lake Sumner would be considered a non-complying activity under Rule 4.2, as it is not otherwise specified as a permitted, restricted discretionary activity, discretionary activity or prohibited activity.

"*To enable proposals to dam water within the parts of the Hurunui, Waiau and Jed river catchments shown as Zone C 'Areas not identified as High Value or Infrastructure Development' on Map 3, where they will:*

(a) not impound water on the mainstem of the Hurunui River~~, downstream of the confluence of the South Branch,~~ or Waiau River ~~downstream of the confluence with the Hope River;~~

680. It is my view that these amendments are appropriate, as they are consistent with the PRPS, and with Policy 6.1.

681. It is therefore my view that in order to give effect to the PRPS (once it is made operative) and in order to achieve Policy 6.1 of the HWRRP, proposed Rule 5.1(b) would need to be amended. This could be done by referring to "*the mainstem of the Hurunui River"* in this rule, noting the earlier comments that this would not include the South Branch or Lake Sumner itself and therefore would still be consistent with the Zone Committee's position.

17. Transfers

17.1 Objective 7

682. Section 136(2) of the RMA provides for the transfer of water take permits, where either the regional rule expressly permits such as transfer, or where application is made to and granted by the consent authority to do so. Section 136(5) allows for the consent authority to transfer the permit with the same conditions as the original permit or to impose different conditions.

683. Policy B3 of the NPSFM, also directs that regional 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. This sits under Objective B3, which seeks to improve and maximise the efficient allocation and efficient use of water.

684. Objective 7 in the HWRRP relates to resource consent transfers, and as is follows:

> *Surface and groundwater resource consents are transferred efficiently, maximising efficient water use in a way that mitigates any additional effects on surface and groundwater levels.*

685. This Objective is to be achieved through Policies 7.1, 7.2 and 7.3, which in turn are to be implemented through Rules 12.1, 12.1 and 13.1.

686. Fish and Game New Zealand, Federated Farmers of New Zealand and Hurunui Water Project Ltd (Submitters 113, 123 and 127) support, or support the intent of Objective 7. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seek that Objective 7 is redrafted so that transfers within the catchment are not used as a mechanism for the re-allocation of water to the most efficient use, and lead to monetary incentives for such transfers. Similarly, Mr and Mrs Demeter (Submitter 125) seek the creation of rules so that surrendered consents, and any water freed up by applying the reasonable use test, are not able to be reallocated. Ms Shand (Submitter 91) does not support any transferring of consents on the basis that this privatises a public resource. It is my understanding that the purpose of allowing for the transfer of water permits, and as provided for under s136 of the RMA, is to allow for water that

has already been consented, to be reallocated to other users. In my view it is difficult for the CRC to control any financial incentives that might arise from such transfers.

687. It is my view that the proposed Objective is the most appropriate way to achieve the purpose of the RMA, because it allows for the transfer of water take consents to assist in maximising the economic benefits of water, while ensuring that the effects are adequately managed to protect in stream values and the life supporting capacity of the rivers. In my view, the type of rules sought by Ms Shand (Submitter 91) would not assist in achieving Objective 7, nor would the removal of transfer provisions from the Plan.

17.2 Policies 7.1, 7.2 and 7.3

688. In my opinion, and as noted by Hydrotrader Ltd, Phoebe Irrigation Ltd and Hawkins Consulting Ltd (Submitters 72, 86 and 96), there is however a tension as to how the objective is to be achieved through the proposed polices. Policy 7.2 is:

> "*Where the sum of consented abstractions in an allocation block is greater than 100% of the Allocation Block limit in the Environmental Flow and Allocation Regime in Table 1, there* ***should*** *be no transfers of resource consents except for transfer applications effected under s136(1) of the Resource Management Act."* (emphasis added).

689. Similar to this, Policy 7.1(e) directs that transfers of surface water takes, or groundwater takes less than 30m deep in the defined River Zone do not "*compromise*" the regime in Table 1. Policy 7.3(a)(vii) directs that transfers of groundwater takes with direct, high or moderate hydraulic connection to surface water "*will not be allowed*" if the surface or groundwater allocation block is over allocated. However, as noted by the submitters the terminology used in these policies appears to conflict with Policy 8.1(b), which seeks to encourage the surrender or transfer of unused water takes in order to maximise the efficiency of water takes, and with the discretionary status[65] afforded to transfers that do not meet the conditions of Rule 12.1 or 12.2, which include a requirement to comply with the Regime in Table 1.

690. Because of this tension, it is my view that the rules and policies are not currently as effective and efficient as they could be. To address this I consider that either the policies themselves need to be amended to be consistent with the discretionary activity status; or a breach of Rule 12.1(c), (consistent with what is sought by Te Rūnanga o Ngāi Tahu and others (Submitter 116)), or 12.2(c) (ii), which relate to compliance with the Regime in Table 1, should be non-complying in order to ensure these rules are more effective in implementing the policies.

691. In my opinion in order to determine which approach is more efficient and effective, it is necessary to consider the context within which transfers occur. In this respect, I agree with the comments by Hydrotrader Ltd (Submitter 72), that very few transfers of water takes from site to site are likely to occur *until* allocation limits have been reached, as those persons wanting permits are able to apply for their own. My understanding is that the A Block allocation limits for both the Hurunui and Waiau rivers are already allocated. I agree with

[65] This assumes that Rule 13.1 is intended to refer to non-compliance with Rules 12.1 and 12.2 rather than 11.1 and 11.2, which is discussed further below.

the submitter that allowing the transfer of water permits to continue (subject to certain criteria), is an effective tool to increase efficiency in the use of water and is likely to free up unused water allocations as encouraged under Policy 8.1(b). In my view, this also gives effect to Policy B3 and Objective B3 in the NPSFM. This, in my view, is also consistent with the outcome sought by Amuri Irrigation Company Ltd (Submitter 83), who seeks alternate wording to Policy 7.2 whereby transfers would be allowed when these limits are exceeded, provided that consent conditions are imposed to "*protect the environmental values that are present and the transfer is shown to achieve the objectives and the policies of this Plan*". Mr Talbot (Submitter 1) also argues that transfers should still be allowed if the sum of consented abstractions are greater than 100% of the Allocation Block limit, on the basis that the transfer will not change the effects resulting from the over-allocation.

692. It is my view, bearing in mind the context within which these transfers are expected to occur, that in order to achieve Objective 7, where transfers are proposed in over-allocated catchments, these should be considered as discretionary activities, and Policy 7.1(e) should be amended accordingly. In my view, Policy 7.2 will not assist in achieving the objective and should be deleted. However, and in line with the comments of the submitters above, it is my view that this enabling approach towards freeing up and reallocating consented water takes, needs to be balanced against other objectives of the HWRRP that seek to protect environmental values. In this regard I note that Amuri Irrigation Company Ltd (Submitter 83) questions whether it is appropriate to confine transfers to only those situations set out in Policy 7.1, as they consider there may be other transfers that are appropriate and situations where conditions do not need to be as stringent. As such they seek that part (b) of Policy 7.1 is amended so that it is not a requirement that the transfer is subject to the same or more restrictive conditions, or the same or lesser rate of take and volume. Given that one of the methods through which the Plan proposes to protect environmental values is through the setting of allocation limits, it is my view that the enabling of more efficient use of any over-allocated water needs to be balanced against the environmental protection aims of the Plan, and it is therefore appropriate to enable transfers to occur, provided that the transfer process allows for the over-allocation, and the potential adverse effects of this over-allocation, to be 'ratcheted back'. In this respect while I accept the point of Mr Talbot (Submitter 1) that a transfer will not change the effects resulting from the over-allocation, it is my view that this does not necessarily mean the effects are appropriate, and in order to meet the wider objectives of the HWRRP, it is appropriate to try and reduce these effects through the transfer process. I also consider that this approach gives effect to Policy B2 of the NPSFM which seeks that existing over-allocation is phased out.

693. For the same reason, I do not agree with Ngāi Tahu Property Ltd (Submitter 121), who seeks deletion of Policy 7.1(d) which requires that the exercise of the consent after transfer does not result in an increase in the length or duration that the river is dry. While the submitter argues that this matter should have been considered under initial grant of consent and should not act as disincentive to transfer, it is my view that in order to meet the wider objectives of the HWRRP, it is appropriate to try and reduce adverse effects such as effects of the length and duration the river is dry, through the transfer process.

694. Amuri Irrigation Company Ltd (Submitter 83) also seeks amendments to Policy 7.1 to allow for transfers to occur between surface water allocation

zones, if the environmental effects of the transfer can be avoided, remedied or mitigated so that they are minor or less than minor. It is my view that this extends beyond the provisions of s136(2)(b), which provides for transfers within the same catchment.

695. In relation to Policy 7.3 which pertains to groundwater takes outside the River Zone, I note that the same context does not apply, as my understanding is that there is currently a greater amount of space in the groundwater allocation blocks. As such, it is my view that the same situation does not arise, whereby the transfer of consents in an over-allocated area needs to be provided for in order to maximise the efficiency of water use and reduce the adverse effects arising from the over-allocation. It is therefore my view that Policy 7.3, including (a)(vii), is an efficient and effective way to meet the overarching objectives of the HWRRP, (including Objective 7), because it seeks to mitigate additional effects arising from transfers on groundwater levels. However, and provided there is scope to do so within the submissions, it is my opinion that a more efficient and effective way of implementing this policy is to make non-compliance with part (b) of Rule 12.2 a non-complying activity, as sought by Te Rūnanga o Ngāi Tahu and others (Submitter 116). In my view, this approach, in relation to what is not currently an over-allocated resource, also assists in giving effect to Objective B2 of the NPSFM, which seeks to avoid any further over-allocation.

696. In relation to transfers, Water Rights Trust Inc (Submitter 48) considers that an additional policy and requirements under Rules 12.1 and 12.2 are necessary to require transferees to provide details about the actual rates and volumes of water used, rather than the consented rates and volumes to ensure that this is considered in the consenting process. It is my view that the wording of Policy 7.1(b), the restricted discretionary status and matters to which discretion is restricted, (e.g. matters (ii) and (vi)) provide sufficient direction to address the concerns of the submitter, without being overly prescriptive in this regard.

17.3 Rules 12.1, 12.2 and 13.1

697. The following addresses submissions relating to the transfer rules that have not already been discussed above.

698. Rule 12.1 is supported by Te Rūnanga o Ngāi Tahu and others (Submitter 116). Hurunui Water Project Ltd (Submitter 127) seeks that the intent of Rule 12.1 is retained, while seeking changes to the load limits in schedule 1 (which are addressed in the water quality section of this report). Ms Sage (Submitter 139) seeks that the rule is deleted, on the basis that she opposes the permanent transfer of water as this could lead to water speculation and capturing of a public resource. She considers that facilitating transfers should be considered when the Plan is reviewed and when land use intensification and irrigation have been proved not to have further degraded water quality. As noted earlier, transfers are provided for in the RMA, are consistent with the NPSFM, and in my view, deletion of the rule would not assist in implementing the Plan's policies or achieving its objectives.

699. Ngāi Tahu Property Ltd (Submitter 121) seeks that part (b) of Rule 12.1, which requires that the reliability of supply for other users is not reduced, is deleted, on the basis that this is a matter that should have been considered under initial grant of consent and should not act as disincentive to transfer. It

is my view that in order to meet the wider objectives of the HWRRP, including Objective 3(f), it is appropriate to ensure that reliability for existing lawfully established users, is maintained through the transfer process, and that as such, this standard and term should be retained.

700. Water Rights Trust Inc and Fish and Game New Zealand (Submitters 48 and 113) seek that the following additional standards and terms are included within Rule 12.1[66], and consequential amendments to the matters for discretion (vii) and (x). Royal Forest and Bird Protection Society (Submitter 136) also seeks the inclusion of the first standard and term, but not the second, but consequential amendments to both matters for discretion (vii) and (x):

> "*the activity in combination with all other activities shall not result in the nutrient limits in Schedule 1 being exceeded; and,*
>
> *fish are prevented from entering the water intake, as set out in Schedule WQN12 of the Natural Resources Regional Plan"*

701. In relation to (f), I note that this is consistent with what the submitters seek in relation to Rules 2.3 and 2.4, and in my view, the additional standard and term is not appropriate, for the same reasons that are discussed in relation to Rule 2.3 (refer **'Water Allocation'** section), and for simplicity are not repeated here. Again, for the same reasons as those relating to Rule 2.3, I also recommend that the relevant matter for discretion - (vii) - is amended to refer to "*any effects on water quality".* I also consider that changes to this matter for discretion will go some way to addressing the concerns of Federated Farmers of New Zealand (Submitter 123), who seeks either that it is deleted, or that it is made clear that the estimated loss of nutrients from the previous activity will be subtracted from the estimated loss of the new activity.

702. Related to this matter, Ngāi Tahu Property Ltd (Submitter 121) seeks that the matter for discretion relating to water quality (vii) is deleted, on the basis that because the rule pertains to transfers, water quality effects are not relevant as the new use should not have any further adverse effects. It is my view that this will not necessarily be the case because the land use enabled by the transfer of water may change and therefore have different effects on water quality depending on soil types, stocking rates etc, and as such I consider it appropriate to retain this is a matter for discretion.

703. In relation to (g), I note that as a restricted discretionary activity, this is a matter that can be considered through the consent process, and is reflected in the matters for discretion (ix). However, I note that including this as a standard and term, rather than a matter for discretion only, is consistent with standards and terms under Rules 2.2(b), 2.3(f), 3.1(e) and 3.2(f). Further, it is my view that it is measurable, and therefore is unlikely to create issues of interpretation. On balance, it is my view that it is appropriate to include this as a standard and term, and consequentially to remove the related matter for discretion which becomes superfluous.

704. Rule 12.2 is supported by Te Rūnanga o Ngāi Tahu and others (Submitter 116). Water Rights Trust Inc, Fish and Game New Zealand and Royal Forest

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[66] Note that Water Rights Trust Inc (Submitter 48) also seeks an additional standard and term, relating to details about the actual rates and volumes of water used, which has been addressed earlier.

and Bird Protection Society (Submitters 48, 113 and 136) also seek that an additional standard and terms is included within Rule 12.2 relating to water quality, as per their submissions on Rule 12.1. In my view this is not appropriate for the same reasons as noted earlier in relation to Rule 12.1 and elsewhere in this report in relation to other similar submission points, but I agree with amendments being made to the relevant matter for discretion (vi). Similarly, for the same reasons as set out above, I also do not agree with Ngāi Tahu Property Ltd (Submitter 121), who seeks that this matter for discretion is deleted. Again, I consider the amendments to (vi) will also go some way to addressing the concerns of Federated Farmers of New Zealand (Submitter 123), which are the same as those relating to Rule 12.1.

705. Irrigation New Zealand Inc (Submitter 104) raises concerns that rules 12.1 and 12.2, while allowing for permanent and temporary seasonal transfers possible, do not easily allow for instant and one-off temporary transfers, seeking that further work is done with the Council to better enable this. As the submitter has not suggested how such transfers could be accommodated through the HWRRP, it is my view that this is something that could be discussed further with the submitter outside of the current planning process.

706. Mr Talbot (Submitter 1) seeks that Rules 12.1 and 12.2 are deleted, arguing that the phrasing of the rule suggests that transfers could occur between catchments or between aquifers, and thus be outside the scope of transfers provided for under s136 of the RMA. However it is my view that the rules are sufficiently clear in this regard as they refer to transfers "*within one surface water allocation zone"* (Rule 12.1) and "*the same groundwater zone"* (Rule 12.2).

707. In relation to the non-notification provisions specified under these rules, Mr Talbot (Submitter 1) notes that it is s77D of the RMA that provides ability for the consent authority to make a rule specifying activities that are not to be publicly or limited notified and suggests that the reference to s95 of the RMA is incorrect. It is my view that the reference in the rule is correct, because while it is made under the powers conferred by s77D, the point of the rule is to preclude notification of these types of application under s95. I note that the non-notification and non-service provisions are supported by Hydrotrader Ltd (Submitter 72), and in my view these provide certainty to applicants.

708. In relation to Rule 13.1, I note that this is supported by Water Rights Trust Inc, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 48, 113 and 136). As noted by Mr Talbot and Hydrotrader Ltd (Submitters 1 and 72), the activity status of transfers that do not comply with the standards of Rules 12.1 or 12.2 is not explicitly specified in the Plan, but it is inferred in the explanation on page 10 that they be considered as discretionary activities. I note that Mr Talbot (Submitter 1) seeks the deletion of Rule 13.1 on the basis of the inconsistency, and because the rule does not add anything to the provisions of the operative NRRP. In relation to the latter, as the NRRP is a separate regional plan that covers matters outside those regulated in this HWRRP, I note that the rules in this Plan have no bearing on those of the NRRP.

709. It is my view that Rule 13.1, which currently refers to Rules 11.1 and 11.2 should refer to Rules 12.1 and 12.2, and given they are in the same section, this was most likely the intention, and I have recommended amendments to the Rule accordingly. In my view to simply delete the rule, as sought by Mr Talbot (Submitter 1), will not assist in determining the activity status for an

application that does not comply with the standards and terms in 12.1 and 12.2 and as such would be inefficient.

710. As noted earlier, I have recommended that non-compliance with Rule 12.2(b) is made a non-complying activity, as sought by Te Rūnanga o Ngāi Tahuand others (Submitter 116). The recommended rule changes are therefore:

Discretionary Activities

Rule 13.1 *Except as provided for in Rule 14.1, t~~T~~he transfer of a resource consent to take or use water that does not comply with Rule 1~~1~~2 .1 or 1~~1~~2.2 is a discretionary activity.*

Non-complying Activities

Rule 14.1 *The transfer of a resource consent to take or use water that does not comply with Rule 13.2 (b) is a non-complying activity.*

18. Efficiency

18.1 Relevant Statutory Provisions

711. Water use efficiency is a matter that is addressed in a number of statutory documents that must be considered in the HWRRP. In the NPSFM, I consider that Objective B3, which seeks to improve and maximise the efficient allocation and efficient use of water, is of relevance to this matter. It is to be implemented through Policies B3 and B4 which direct that regional plans are to: state criteria by which approvals of transfers of water take permits are to be decided including criteria to improve and maximise the efficient allocation of water; and to identify methods to encourage the efficient use of water.

712. It is my view that in order to give effect to the NPSFM, the HWRRP must identify methods (whether rules or other methods) for encouraging water use efficiency, including those applying to water take permit transfers.

713. Under the RPS, Policy 3 (Chapter 9) seeks to promote efficiency in the use of water.

714. Within the PRPS, I consider that Objective 7.2.2 is relevant, which seeks that water abstraction and development of water infrastructure occurs in parallel with improvements in efficiency and Policy 7.3.8 sets out how such efficiency is to achieved.

18.2 HWRRP Efficiency Provisions

715. Objective 8 and Policy 8.1 of the HWRRP relate to water use efficiency, and are as follows:

Objective 8

Water used for out of steam uses is maximised while ensuring water remains instream to the greatest extent practicable.

Policy 8.1

To maximise efficiency in the taking and use of water in the Waiau, Hurunui and Jed river catchments, by ensuring that:

(a) any leakage in the design and operation of infrastructure used to take or convey water is minimised;

(b) the surrender or transfer of unused water takes is encouraged;

(c) a minimum of 80% application efficiency for irrigation uses as per WQN16 of the Natural Resources Regional Plan with an annual volume to provide reasonable use of water, for the intended land use, for 9 out of 10 years;

(d) all water takes in excess of 5l/s are metered and the data recorded is telemetered to an Approved Third Party Service Provider for distribution on an agreed frequency to the Canterbury Regional Council; and,

(e) resource consents to take are for a specified use and that the rate and volume of abstraction are reasonable for the intended use in accordance with Policy WQN16 of the Natural Resources Regional Plan.

716. Fonterra Co-operative Group Ltd, Fish and Game New Zealand, and Dairy NZ Inc (Submitters 100, 113 and 134) support the objective. Other submitters[67] raise concerns about the way the objective is currently written, arguing that the proposed wording has little direct relevance to water use efficiency and does not address the environmental issue from which this stems, and ultimately is confusing.

717. It is my view that the concerns raised by these submitters are valid. In my view, the second half of the objective relating to water remaining instream, is already covered by Objective 3 and does not need to be restated within this Objective, which should, in my view, focus on efficiency of water use. I consider this also addresses the concerns raised by Royal Forest and Bird Protection Society (Submitter 136) that the wording suggests that the goal is to maximise the water taken out of rivers without adequately protecting environmental values. It is my view that the Objective could be better worded to address the resource management issue, and in turn, better achieve the purpose of the RMA. Within this context, my preference is for the wording suggested by Federated Farmers of New Zealand (Submitter 123) as follows, on the basis that is most succinctly addresses the issue:

"*Water taken for out of stream purposes is used efficiently"*.

[67] Amuri Irrigation Company Ltd, Ngāi Tahu Property Ltd, Mr Rankin, Federated Farmers of New Zealand and Hurunui Water Project Ltd (Submitters 83, 121, 122, 123 and 127).

718. In relation to Policy 8.1, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 113 and 136) support the policy. Amuri Irrigation Company Ltd and Phoebe Irrigation Ltd (Submitters 83 and 86) seek changes to part (a) of this policy which seeks minimisation of leakage in the design and operation of infrastructure used to convey water, on the basis that leakage reduction should be qualified to be as far as is practicable. It is my view that some re-wording of the policy along these lines is appropriate to provide clarity.

719. Mr Higgins (Submitter 45) opposes part (c) of the Policy, which requires a minimum of 80% application efficiency for irrigation uses in line with policy WQN16 of the NRRP, and an annual volume to provide reasonable use of water for the intended land use for 9 out of 10 years. This is opposed on the basis that it rules out most forms of irrigation except centre pivots, and because the submitter considers that annual volumes should be generous and on a four-year rolling average. Independent Irrigators Group (Submitter 92) also seeks removal of the reference to "9 out of 10 years" from part (c), on the basis that both part (c) and (e) of the Policy refer to Policy WQN16 of the NRRP, which provides for reasonable use to be calculated by any appropriate and justified method.

720. It is my view that the 80% application efficiency is appropriate, as it is consistent with the approach taken in the NRRP, and is, in my view, necessary to the achieve the overarching goal of efficient water use. It is my view that the submitters do not provide sufficient justification as to why a lesser application efficiency is more appropriate to achieve the Plan's objectives. In relation to the reference to 9 out of 10 years, again I note that the purpose of this policy is to achieve efficient water use. In effect, it requires that in a drier year, water is used more efficiently. In my view this is an appropriate way to meet the objective. I also note that while Policy WQN16 of the NRRP does not itself explicitly refer to 9 out of 10 years, it refers to Schedule WQN9, which in turn provides for calculations to be based on "*demand conditions that occur in nine out of ten years*". As such, it is my view that part (c) of the Policy is consistent with the NRRP. Further, it is my view that part (c) of the Policy is more effective in implementing the direction given in the PRPS provisions and better encourages efficient use of water, thus giving effect to Policy B4 of the NPSFM.

721. Related to this, Mr and Mrs Black (Submitter 11) raise concerns with capping water users with a set allocation because of the variation between soil types, which I presume relates to part (c) of the policy which requires a minimum of 80% application efficiency for irrigation uses. In my view this concern is already addressed by part (e) which provides for water take consents to be for a specified use with the rate and volume of abstraction being "reasonable for the intended use", and as provided for in Policy WQN16 of the NRRP.

722. Federated Farmers of New Zealand (Submitter 123) seeks that part (c) of the policy be re-worded to flow from the beginning of Policy 8.1 and that 'Policy' be inserted before the reference to WQN16. It is my opinion that such changes will provide greater clarity and therefore better assist in achieving the objective.

723. Part (d) of Policy 8.1 requires that all water takes in excess of 5l/s are metered, and that recorded data is telemetered to an 'Approved Third Party Service Provider'. Phoebe Irrigation Ltd (Submitter 86) seeks that the telemetry requirement is only applied for takes above 50l/s, with mechanical

meters used between 10-50l/s, on the basis that such requirements would be cost prohibitive for smaller takes. Ngāi Tahu Property Ltd (Submitter 121) raises concerns that the current wording of part (d) might require metering of an intermittent take for an activity with only minor effects, and seeks amendments to the wording to addresses these. In relation to the telemetry requirement, I note that it provides for a fast flow of information that allows for the Council to respond quickly to this monitoring. I also note that collection of such information is also likely to assist with developing water user groups, maintaining and improving water use efficiency, and ensuring compliance with minimum flows, which in my view are all important components of meeting the water efficiency aims of the HWRRP, and the directions given in the higher level planning documents.

724. In relation to intermittent takes, it is my view that the amended wording sought by Ngāi Tahu Property Ltd (Submitter 121) is appropriate, as it better achieves the balancing objectives of the Plan by recognising that intermittent takes (below the proposed amount to be specified) will not have the same level of effects, nor require the same level of monitoring, as continuous takes. I also consider that this amendment will assist in addressing the cost concerns of Phoebe Irrigation Ltd (Submitter 86).

725. Federated Farmers of New Zealand (Submitter 123) seeks deletion of part (d) on account of it being unnecessarily prescriptive, and more appropriate as a consent requirement. I note that as this is a policy, rather than a rule, it is likely that the policy will be implemented through consent conditions. As such it is my view that the Policy makes it clearer what is to be expected as a consent requirement, and is necessary to assist in achieving the objective.

726. Water Rights Trust Inc (Submitter 48) seeks amendments to Policy 8.1(d) because of concerns that there are non-statutory initiatives contained within the ZIP that are critical to avoiding, remedying or mitigating adverse effects on the environment, that cannot be undertaken without adequate funding. They therefore seek that part (d) of the policy states that the Council "*will apply and charge water users a set levy on volume use to help fund fresh water improvement and monitoring initiatives.*" The ability to, and the process for, establishing such levies is under the Local Government Act 2002 ("LGA"), and through the annual and long-term planning cycles provided for under that Act. These processes also require specified consultation to be undertaken on both how rates and levies are charged, and what this is spent on. As such this matter is outside the scope of the HWRRP and therefore it is not appropriate to include these statements in the Policy, because it could circumvent the consultation and decision-making process under the LGA.

727. Related to Policy 8.1(e), Ballindalloch Farm Ltd (Submitter 140) seeks that run of the river takes should not be subject to seasonal allocation, on the basis that as long as the minimum river flows are achieved and in a dry season, irrigation should not have to stop during the irrigation season when irrigation is needed for productivity. Related to this, Mr and Mrs Black (Submitter 11) raise concerns over the idea of monitoring rain water each season and basing water allocation on this, arguing that this is not realistic given the weather is not something that anyone can control. It is my opinion that annual volumes are appropriate, as they allow for irrigation to occur, but ensure that it occurs in an efficient way, and thereby maximises the availability of water for other activities. It is my understanding that annual volumes are calculated through matching plant growth with water requirements to determine a seasonal demand, so that irrigation is effective,

but also efficient. It is my view that this approach appropriately balances the economic benefits of irrigation with the benefits resulting from efficiency.

728. Related to the Plan's approach to water use efficiency, Mr Brian Sandle (Submitter 111) seeks that any provider or on-provider of water within the Zone should provide publicly available records showing that the receivers are using practices and producing results which are strongly sustainable. It is my view that no changes are required to the HWRRP in relation to this, as consent applications to take and use water are publically available information, and water use efficiency is a matter that will be considered as part of any application, with policies and objectives in the Plan that relate to this.

729. In relation to the '**Efficient Use of Water'** sub-section in Part 1 of the Plan, which provides explanation of how the HWRRP proposes to address water use efficiency, Mr John Talbot (Submitter 1) considers that the first paragraph in this sub-section appears to allow transfers between groundwater and surface water take consents, which he considers is ultra vires as s136(2) does not provide for such transfer. As such, he seeks that the paragraph is aligned with the RMA (note that the submitter's comments on this sub-section relating to the NRRP are addressed in the general comments and therefore not repeated here). As set out in the legal submissions part of the s42A report, section 136(2) does not exclude the transfer of groundwater and surface water permits. However, in any event, the Rules in the HWRRP do not permit this as Rule 12.1 specifically relates to surface water and Rule 12.2 specifically relates to groundwater.

730. Federated Farmers of New Zealand (Submitter 123) seeks that this sub-section is amended to state that the Plan will aim for at least 90% reliability of water supply. It is my view that such changes are not appropriate as this sub-section relates to efficient use of water, and in my view it is not appropriate to discuss reliability of supply matters here. Nor do I consider that such a statement reflects the Plan's policies.

19. Resource Consent Management

731. Within the policy framework of the HWRRP, Objective 9 and Policies 9.1-9.4 relate to how resource consents are to be managed from the point of view of consent duration, spatial and temporal sharing of water, and alignment of consents with CWMS priorities. The heading in the Plan above these policies is entitled '*Priority of Use"* and is opposed by Te Rūnanga o Ngāi Tahu and others (Submitter 116), on the basis that they consider it inappropriate for the Plan to set out what activities have priority to the use of water. In my view, while the provisions under the heading do partially relate to priority (and are discussed further below) the heading is somewhat misleading, and in my opinion a more appropriate heading would be '*Resource Consent Management'*.

732. Objective 9 seeks that:

> "*Water in the Hurunui, Waiau and Jed Catchments is managed in an integrated manner, with any changes in water management being undertaken in a consistent way which is fair and equitable for all resource consent holders*"

733. The provisions in the HWRRP that specifically relate to this objective are:

a. Policies 9.1 and 9.2, which seek to establish common expiry dates for resource consents and limit their duration to 10 years (Policy 9.1), or to 35 years for hydro-electric generation or large scale water storage with a capital cost of more than $10,000,000;

b. Policy 9.3, which relates to prioritising consents after 2025 to align with the priorities of the CWMS;

c. Policy 9.4 which relates to enabling spatial and temporal sharing of allocated water between users and allocation blocks, provided that existing A Allocation Block consent holders retain priority and within B Blocks, irrigation activities are afforded first priority.

19.1 Objective 9

734. Fish and Game New Zealand, Federated Farmers of New Zealand and Hurunui Water Project Ltd (Submitters 113, 123 and 127) support Objective 9. Department of Conservation (Submitter 90) supports the objective in part, seeking that it refer to "*water users*" as well as resource consent holders, on the basis that the Plan provides for water flows based on the needs of a range of users. While I agree with this point in a general sense, it is my view that this objective, and the policies and rules that are to achieve this objective relate to how resource consent applications are to be managed. Wider consideration about water flows and allocation and the needs of other users (not just consent holders) are in my view already addressed through Objectives 2 and 3. In my opinion it would not be efficient or effective to include this matter in Objective 9 as well.

19.2 Relevant Statutory Documents

735. In my opinion, the relevant provisions of the NPSFM are Objectives B3 and C1 which seek to improve effiency and the integrated management of fresh water. Policies B2, B4 and C1 direct that regional plans are to achieve this by providing for the efficient allocation of freshwater to activities, within the limits set to give effect to Policy B1, and through identifying methods in regional plans to encourage the efficient use of water.

736. In the PRPS, I consider Policies 7.3.4, 7.3.8 and 7.3.11 are relevant to this matter. These direct: that abstraction of surface water and groundwater is managed is a way that addresses a number of listed matters; how efficiency in allocation of water is to be improved; and that existing activites and infrastructure are recognised and provided for.

19.3 Consent Duration

737. The following policies are proposed in the HWRRP in relation to consent duration:

> *Policy 9.1*
>
> *To limit the duration of any new resource consent (including the replacement of expired resource consents) to take, use or divert surface water or stream-depleting groundwater from within the Hurunui, Waiau and Jed river catchments to no later than 1 January 2025; and thereafter to no later than 1 January 2035, and to limit the duration of all new resource consents (including the replacement of expired resource consents) to not more than 10 years, ensuring that*

resource consents granted within 10 years of a common expiry date should expire on the immediately following expiry date.

Policy 9.2

Notwithstanding Policy 9.1, to recognise the regional significance of applications for hydro-electric generation and large scale water storage with a capital cost of more than $10,000,000, and to provide for a resource consent duration of up to 35 years.

738. These policies are also reflected in the description found in the '*Efficient Use of Water*' sub-section of the '*How this Plan Responds to the Resource* Management *Issues and the Hurunui Waiau Implementation Programme'.*

739. Several submitters have raised concerns that a maximum consent duration of 10 years for infrastructure associated with such consents, such as on-farm irrigation, is overly restrictive and too uncertain for the level of investment associated with such infrastructure.[68] Federated Farmers of New Zealand (Submitter 123) argues that the limits are not consistent with the Ministry for Environment guidelines on consent durations and reviews because they do not adequately take into account the costs and benefits of the activity and the capital investment into a pre-existing activity. Hawkins Consulting Ltd (Submitter 96) also considers that investments related to irrigation consents that are of the same magnitude as hydro-electric generation and large scale water storage should be treated in the same way as those activities are under Policy 9.2. Similarly, Ngāi Tahu Property Ltd (Submitter 121) also raises concerns that an overall project may involve significant levels of investment yet not be treated in the same manner as infrastructure associated with those activities specified in Policy 9.2. The decisions sought by these submitters include:

a. The deletion of Policy 9.1 altogether; or

b. Amendments to extend the provisions of Policy 9.2 to other activities; or

c. A reduction in the $10,000,000 threshold.

740. Mr Talbot and Independent Irrigators Group (Submitters 1 and 92) note that there are provisions in the RMA and the NRRP that deal with consent duration. In regards to the latter, it is my understanding that this Plan overrides the NRRP in relation to the activities it covers and therefore provisions in the NRRP relating to consent duration are not relevant to activities controlled by this Plan. Similarly, while Federated Farmers of New Zealand (Submitter 123) argues that the proposed consent duration limitations are inconsistent with the NRRP, it is my view that there is no legal requirement for them to be consistent given that the HWRRP is a stand-alone regional plan in relation to the activities to which it applies. In relation to the RMA, I note that s123 provides limits for the duration of consent for certain activities. Under s123 the duration of resource consents issued under the HWRRP, excluding land use consents, cannot exceed 35 years.

[68] Amuri Irrigation Company Ltd, Phoebe Irrigation Ltd, Irrigation New Zealand Inc, Federated Farmers of New Zealand, Fonterra Co-operative Group Ltd (Wellington) and Dairy NZ Inc (Submitters 83, 86, 104, 123, 100, 23 and 134).

741. Relying on the provisions of the RMA alone in relation to consent duration may therefore provide greater flexibility for consents to take, use or divert surface water or stream-depleting groundwater that do not fall within those circumstances described in Policy 9.2, but may require a significant investment in infrastructure. Conversely however, determining and setting the consent duration for such consents through the HWRRP provides greater certainty and ensures new and replacement consents are treated in a consistent manner rather than on an ad-hoc and individual basis.

742. In my view, the main advantage of Policy 9.1 is that there will be a common expiry date for consents within the same catchment, which will allow the Council to consider all take, use and diversion consents together, and address any effects that have arisen particularly through the cumulative effects of these takes. In addition, I note that in the implementation guide to the NPSFM, common expiry dates are mentioned as one of the options available to councils to address over-allocation and therefore improve efficiency[69]. This approach, along with the limitation of consent durations to 10 years, is supported by Te Rūnanga o Ngāi Tahu and others (Submitter 116). As I understand it, the Council has experienced difficulties in trying to undertake this kind of holistic review through the provisions of s128 of the RMA which allows for the consent authority to undertake a review of the conditions of existing consents.

743. While I accept that the duration of consent proposed in Policy 9.1 may lead to uncertainties for applicants, in my view not specifying in a policy the consent duration that will be imposed does not remove this uncertainty, given that the Council has full discretion to impose such a limited duration on a consent in any case. In other words, removing Policy 9.1 will not, in my opinion, necessarily deliver what the submitters are ultimately seeking. It is also my view that because this is a policy, it does not necessarily preclude a consent being granted for a longer duration, with inconsistency with the policy being weighed as part of the overall consideration of any consent application.

744. In terms of the NPSFM, it is my view that the proposed approach under Policy 9.1 will assist in improving the efficient allocation of water (Objective B3 and Policy B2), represents an integrated approach to the management of such consents (Objective C1), and will better assist in addressing cumulative effects through providing a common expiry date (Policy C1).

745. However I agree that the benefits of establishing common expiry dates for consents through this policy needs to be balanced with the costs associated with the uncertainty for applicants installing and maintaining infrastructure associated with such consents. In my view, this balance is reflected in Policy 9.2 which provides for the maximum 35 year duration for hydro-electric generation and large scale water storage where the capital cost of these is greater than $10,000,000. Meridian Energy Ltd and Hurunui Water Project Ltd (Submitters 80 and 127) support the intent of Policy 9.2 and seek its retention. In my view, there will be a limited number of consents of this scale within the catchment, and as such, addressing any adverse effect on the environment which may arise from the exercise of these consents through consent condition reviews undertaken under s128 is appropriate. This is because in my opinion this will not undermine the intention behind Policy 9.1

[69] Ministry for the Environment. (2011). *National Policy Statement for Freshwater Management 2011: Implementation Guide.* Wellington: Author, p. 28.

which provides for a common expiry date to consider the effects of larger numbers of smaller takes, and it more appropriately recognises the investment uncertainty in activities with larger capital costs.

746. However, in my view, the same principle would also apply to any infrastructure associated with water take, use and diversion, and should not be restricted to hydro-electric generation and large scale water storage infrastructure activities alone. I therefore recommend re-wording the policy as follows:

> *Policy 9.2*
>
> *Notwithstanding Policy 9.1, to recognise the regional significance of applications for hydro-electric generation, ~~and~~ large scale water storage and large scale irrigation infrastructure with a capital cost of more than $10,000,000, and to provide for a resource consent duration of up to 35 years.*

747. As a consequential change, I also recommend amendments to the fourth paragraph under the heading "*Efficient Use of Water*" as follows:

> "*It is recognised that large scale water storage, ~~infrastructure and~~ hydro-electric power generation and large-scale irrigation infrastructure can be very costly to develop and ~~the infrastructure that is developed is likely to~~ may have a working life in excess of 80 years. The Plan therefore ~~seeks~~ ensures that these types of activities, when the capital cost is greater than $10,000,000, ~~have resource~~ can be consented for up to 35 years, the maximum term possible under the Resource Management Act*."

748. Further, it is my view that to address the concerns of submitters, a lower threshold for when Policy 9.2 is applied may be appropriate. Such a threshold in my view should not undermine the intent of Policy 9.1, to generally have a common expiry date for smaller consents so these can be reviewed holistically, but may not need to be as high as $10,000,000. Submitters may be able to expand at the hearing on a more appropriate figure that would better achieve the objectives of the Plan.

749. In my view, this policy, as amended, is more consistent with Policy 7.3.11 of the PRPS, because it better recognises and provides for the continuation of existing irrigation schemes, and other activities which involve substantial investment in infrastructure.

750. In relation to Policy 9.1, I note that Amuri Irrigation Company Ltd (Submitter 83) also seeks that this policy be extended to cover the damming of surface water within the Hurunui, Waiau and Jed river catchments, and the discharge of water or contaminants to surface or groundwater within these catchments. In my view, the same rationale for reviewing consents in a holistic manner throughout the catchment does not apply in relation to damming, as it would to take, use and diversion consents. This is essentially because in my view, while cumulative effects arise from multiple separate water takes consents that can be appropriately addressed together in a consent review, cumulative effects from multiple dams are unlikely to arise. In relation to discharge to surface water or groundwater, I note that the HWRRP only applies to the discharge of water where it has been used for a non-consumptive purpose and in my view the policy should not be extended beyond this as suggested by the submitter.

19.4 Priority - Policy 9.3

751. Policy 9.3 is supported by Meridian Energy Ltd, Hurunui District Council, Ms Shand, Te Rūnanga o Ngāi Tahu and others, and Dairy NZ Inc (Submitters 80, 88, 91, 116, and 134). The policy is:

> *To prioritise resource consents within the catchments to align with the Canterbury Water Management Strategy first and second order priorities so that:*
>
> > *(a) resource consents granted for environmental reasons, customary use, community supplies and stock water are given the highest priority; and,*
> >
> > *(b) resource consents granted for irrigation, renewable electricity generation, recreation and amenity reasons are given lower priority.*

752. Federated Farmers of New Zealand (Submitter 123) argues that the first and second order priorities of the CWMS are to assist with ensuring that water resources are sustainably managed, and not to prioritise resource consents. They consider that prioritising resource consents in line with the CWMS priorities is inconsistent with the CWMS philosophy of parallel development.

753. Water Rights Trust Inc (Submitter 48) seeks that given the necessity under s63 of the ECan Act to have particular regard to the vision and principles of the CWMS, that the Policy apply from the notification of the Plan (1 October 2011) rather than "*post 2025".* Hurunui Water Project Ltd (Submitter 127) seeks the intent of the policy to be retained, but the reference to the CWMS to be deleted, on the basis that it is a non-statutory document and can be changed at any time. I note that the legal submissions address the matter of weight to be given to the CWMS.

754. Amuri Irrigation Company Ltd (Submitter 83) seeks that the Policy be deleted on the basis that this is more explicit than the purpose of the RMA and that it is not appropriate in a resource management context to afford priority of some uses over others, noting that elevation of some uses over others is not required under the NPSFM. Further, they consider that prioritisation as proposed is inconsistent with the water allocation principles established under the RMA, in terms of applications being heard and decided upon in the order in which they are lodged.

755. It is my view that there is a need, firstly, to recognise that there is a legislative requirement to have particular regard to the vision and principles of the CWMS. It is my view that the priorities outlined in the CWMS are fundamental to this, and therefore it is appropriate to acknowledge them with the HWRRP. While I acknowledge that the NPSFM does not require prioritisation of some uses over others, it is my view that the approach taken in the HWRRP is not inconsistent with the NPSFM. In particular, I note that the NPSFM itself includes a list of national values, and the implementation guide to the NPSFM states that while these are not prioritised, this is because it is not possible to do so at a national level, given the range of local circumstances and consideration that might apply in different areas. Rather regional communities, facilitated by regional councils, are "*to consider values and*

priorities locally and determine how to respond to those values at a local level in implementing the policies of the NPSFM"[70].

756. Related to this, it is also my view that for a regional plan to achieve the purpose of the RMA, it must consider that purpose in the regional context. In this regard, while the CWMS may not be a statutory document, it provides, in my view, a significant amount of guidance as to how to promote the sustainable management of the water resource within the Canterbury region. Further, while the policy provides guidance on prioritisation of resource consents, this will not affect the priority established through case law for the hearing and determination of consents.

757. However, in my view, there is a tension with the policy, as identified by Amuri Irrigation Ltd (Submitter 83), and its use of the word 'priority', with the traditional understanding of priority in terms of case law (refer legal submissions). While it is my view that 'priorities' as contained in the CWMS has a different meaning than 'priority' as it relates to case law, this may not be clear in the current wording of Policy 9.3.

758. It is my view that the consideration of the priority of activities, and ultimately consideration of the vision and principles of the CWMS, is reflected in the objectives and policies of the HWRRP already. For example, the environment is given priority in the sense that several of the objectives set environmental bottom lines that are reflected in the minimum flows and planning framework in terms of water allocation. Community and stock water supplies are addressed in Objective 1, and provide 'priority' through allowing for these takes to continue (subject to a water WSAMS being in place), when the minimum flow is reached, when other takes cannot. I therefore do not consider that it is necessary to have an additional policy that potentially conflicts with priority in the case law sense, in order to have appropriate regard for the CWMS vision and principles. Further, it is my view that the planning regime proposed under the HWRRP does not really implement the policy, in the sense that there are no rules to 'set aside' water within allocation blocks for specific first order priority uses. As such, I do not consider that the policy is the most appropriate way, nor is it necessary to achieve the Plan's objectives. It is also my view that the policy is not necessary to give effect to the NPSFM, or Policy 7.3.4 of the PRPS. This is because while that policy seeks that water abstraction provides for community and stock drinking water supplies, customary uses, and meets various environmental outcomes, it is my view that this is already reflected in other provision in the HWRRP, without the need for Policy 9.3 as well. For all these reasons, I recommend the policy is deleted.

759. However, should the Hearings Panel consider that it is necessary and appropriate to refer to the CWMS priorities within the HWRRP, in order to achieve the Plan's overarching objectives, in my view the policy could be better worded as follows:

> "*To align ~~prioritise~~ resource consents, post 2025, within the catchments ~~to align~~ with the Canterbury Water Management Strategy first and second order priorities as follows ~~so that~~:*

[70] Ministry for the Environment. (2011). *National Policy Statement for Freshwater Management 2011: Implementation Guide.* Wellington: Author, p. 8.

(a) first order priorities - ~~resource consents granted for environmental reasons~~, customary use, community supplies and stock water ~~are given the highest priority; and,~~

(b) second order priorities - ~~resource consents granted for~~ irrigation, renewable electricity generation, recreation and amenity ~~reasons are given lower priority~~.

760. New Zealand Pork Industry Board (Submitter 112) requests clarity as to where water for agricultural activities that is not irrigation (such as cool down water for animals, or wash down water) falls within the priority system of Plan, and seeks that water essential for the ongoing health and sanitation of animals in included within part (a) of the policy as a first order priority. Should the policy not be deleted, it is my opinion that the change sought is not appropriate, because the policy simply reflects the CWMS priorities. In terms of how the HWRRP deals with the types of activities discussed by the submitter, I note that the allocation for water for such activities is no different than other activities in terms of the objectives and policies that seek to enable allocation of water provided that the effects of this are appropriately managed. For example, Rule 1.3 provides for a permitted activity status for small scale takes of water which in my view the types of activities discussed by the submitter is likely to fall into. Should such a take not meet the permitted activity standards, it would then be considered as a restricted discretionary activity, provided it was within the allocation limits. It is my view that such an approach is appropriate, because it addresses the effects of the take, rather than focussing on the activity in itself.

761. I note that the final two paragraphs in the '*Efficient Use of Water*' section within Part 1, also discuss priorities. As I have recommended that Policy 9.3 is deleted, I have also recommended consequential changes to this explanatory section, which are shown in **Appendix 2**. I also note that Meridian Energy Ltd (Submitter 80) has sought amendments to these two paragraphs that I generally consider are appropriate as they provide greater clarity, although the changes recommended in **Appendix 2** do not include some of the deletions sought by the submitter that I consider are necessary to provide clarity.

19.5 Sharing - Policy 9.4

762. Policy 9.4 seeks to enable the spatial and temporal sharing of water between different uses within allocation blocks, provided that within the A Allocation Blocks, existing consent holders retain priority, and within the B Allocation Blocks, irrigation activities are afforded priority on an ongoing basis. New Zealand Pork Industry Board and Federated Farmers of New Zealand (Submitters 112 and 123) seek retention of Policy 9.4, and Hurunui Water Project Ltd (Submitter 127) supports intent of part (b) of the policy. Ms Shand (Submitter 91) also supports the policy, subject to other amendments sought in relation to allocation reductions, which are discussed elsewhere in this report.

763. Mr Talbot (Submitter 1) considers that the Policy is not clear, and requests clarity as to what enabling "*the spatial and temporal sharing of allocated water between different uses*" means. It is my understanding that this relates to

allowing the same water to be allocated to two or more activities, provided that this water is not in use at the same time. For example, a portion of water could be reallocated below a non-consumptive take, where that take has returned that water to the river (spatial sharing). Similarly, water could be allocated to both hydro-electric power generation and irrigation, provided that at any given time, the shared water is being used for only one use (temporal sharing). It is my view that the current wording is appropriate to achieve the Plan's objectives, and given that no alternate wording has been proposed by the submitter, it is difficult to compare possible alternate wording that may be more appropriate.

764. I note that this submitter also seeks that statements within the sub-sections 'Allocation of Water' and 'Efficient Use of Water' section within Part 1, which refer to the spatial and temporal sharing of water, are deleted, on the basis that they consider it to be ultra vires under s30(4)(a) of the RMA, and any policies and rules that seek to implement what is stated in these paragraphs.

765. Te Rūnanga o Ngāi Tahu and others (Submitter 116) seeks deletion of the policy on the basis that they consider that it contradicts and potentially undermines other policies, such as proposed Policy 7.2, as Policy 9.4 seeks to transfer water without restrictions, contrary to the restrictions outlined in 7.2. The submitter also considers that the policy as drafted would allow for water trading to occur which the submitter is opposed to. In relation to water trading, it is my view that the proposed approach in the HWRRP does not provide for any greater incentive for water trading than currently exists. For the reasons outlined in the discussion on transfers, it is my recommendation that Policy 7.2 should be removed. As such, this also removes any potential contradiction between it and proposed Policy 9.4. Notwithstanding this, it is my view that Policy 9.4 does not in any case relate to transfers; rather it seeks to allow for 'sharing' of water outlined above. This, in my view, is an efficient and effective method for ensuring the environmental, social and cultural aims of the Plan are met, whilst also allowing for the "most use" of available water, as is also sought under the Plan. As such, my view is that the Policy is appropriate to help achieve several of the objectives of the Plan.

766. In my view, the policy also gives effect to the NPSFM, as the temporal and spatial sharing of water will assist in maximising the efficient allocation and use of water, and is an appropriate method (together with others proposed in the Plan) to achieve this. Similarly, in terms of Policy 7.3.8(5) of the PRPS, Policy 9.4 will assist in improving the efficiency in the allocation and use of fresh water because it recognises the potential for efficiency in infrastructure through combined uses of water.

19.6 New Policy

767. Meridian Energy Ltd (Submitter 80), while acknowledging the priorities afforded under Policies 9.3 and 9.4, seeks that an additional policy be included in the Plan, to enable the use of water for hydro-electric generation when shared in accordance with Policy 9.4 or within the C Block Allocation, in order to give effect to the NPSREG, and in accordance with the regard to be had to the matters in s7(i) and (j) of the RMA, and to assist in delivering on priorities for allocation in the CWMS.

768. It is my opinion that such a policy is not necessary, because the Plan already provides for this. For example, in my view it repeats what is already set out in Policy 9.4 in relation to spatial and temporal sharing, and Policy 3.6 in relation to enabling the use of C Block water. It is my view that these existing provisions are sufficient to give effect to the NPSREG and give sufficient regard to the matters in s7(i) and (j) of the RMA. Further, an additional policy may create confusion in relation to the priorities set in the CWMS. I also note the comments in the implementation guide to the NPSFM, that while electricity generation is identified as one of the important national values of fresh water, the NPSFM does not prioritise uses or values[71].

769. Z Energy Ltd, BP Oil NZ Ltd, Mobil Oil NZ Ltd and Caltex NZ Ltd (Submitter 14) also seek an additional Policy be included in this section of the Plan, that recognises the need to afford some priority to short term takes required for the non-consumptive purposes of carrying out excavation, construction and geotechnical testing activities. As with my comments in relation to New Zealand Pork Industry Board (Submitter 112), it is my view that the activities are already adequately addressed through the provisions of the HWRRP, in that the allocation for water for such activities is no different than other activities, in terms of the policies and objectives that seek to enable allocation of water provided that the effects of this are appropriately managed. As such, Rule 1.3 provides for a permitted activity status for small scale takes of water, and should such a take not meet the permitted activity standards, it would then be considered as a restricted discretionary activity, provided it was within the allocation limits. In my view this is appropriate.

20. Mauri

770. 'Mauri' is defined in the HWRRP as being:

"*The elements of physical health which Ngāi Tahu use to reflect the status of mauri and identify the enhancements needed include:*

- *Aesthetic qualities eg water clarity, natural character and indigenous flora and fauna;*
- *Life supporting capacity and ecosystem robustness;*
- *Depth and velocity of flow;*
- *Continuity of flow from the mountains to the sea;*
- *Fitness for cultural usage; and,*
- *Productive capacity*."

771. The Plan states that mauri is a critical element of the spiritual relationship of Ngāi Tahi Whanui with the Waiau and Hurunui Rivers, because their mauri "*represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life"* (p. 2).

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[71] Ministry for the Environment. (2011). *National Policy Statement for Freshwater Management 2011: Implementation Guide.* Wellington: Author, p. 2.

772. The following provisions of the HWRRP address mauri:

a. Part (a) of Objective 2 aims to ensure that management of water flows and levels in the zone **does not result in adverse impacts on** the mauri of the waterbodies (emphasis added);

b. Part (a) of Objective 3 seeks for water to be allocated so as to enable further economic development while **protecting** the mauri of waterbodies (emphasis added);

c. Part (a) of Objective 5.1 seeks that concentrations of nutrients entering the mainstems are managed to **maintain and enhance** the mauri of the waterbodies (emphasis added);

d. Policy 2.6 is "*to ensure that any new take, dam, diversion or discharge of water **does not adversely affect** the mauri of the Hurunui and Waiau rivers and their tributaries"*(emphasis added).

e. Policy 5.3 directs that the mauri of the Hurunui River and its tributaries is **protected**, while also providing for future development in the catchment, through annual nutrient loads specified within the policy being applied (emphasis added).

773. Some submitters have commented on these provisions, as well as related discussions in the Plan such as the explanation section on '*How this Plan Responds to the Resource Management Issues and the Hurunui Waiau Zone Implementation Programme'.* The following provides a summary of the submission points of these submitters at a general level, rather than referring to exact submission points.

774. Amuri Irrigation Company Ltd (Submitter 83) considers that as the RMA is not a "no effects" statute, these provisions should be amended to better reflect that the activities sought to be enabled by these plan provisions should not result in unacceptable adverse effects on matters such as mauri. The submitter considers that a more appropriate test, is that the adverse effects of the activities be avoided, remedied or mitigated to the extent that they are acceptable or appropriate, which in their view still enables protection, through avoidance and mitigation while recognising there may be instances where mitigation is acceptable, and that this accords with s5(2) of the RMA.

775. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) generally seek that references to adverse effects be changed to refer to 'significant' adverse effects, on the basis that avoiding any adverse effects makes the objectives unachievable.

776. Ravensdown Fertiliser Co-operative Ltd and Hurunui Water Project Ltd (Submitters 102 and 127) seek, at a general level, that the Plan be amended to "recognise" the mauri of the river in any assessment, rather than the provisions requiring protection, maintenance or enhancement of the mauri of the waterbody, and this is reflected in their decisions sought on the related provisions. As with Amuri Irrigation Company Ltd (Submitter 83), these submitters consider that the Plan should recognise that the RMA's purpose is to enable activities, anticipating that environmental effects will occur, and requiring that these effects "*are managed to levels accepted by the community*" (Ravensdown Fertiliser Co-operative Ltd (Submitter 102)), rather than there being no effects from activities.

777. Ravensdown Fertiliser Co-operative Ltd and Hurunui Water Project Ltd (Submitters 102 and 127) also raise concerns as to how the aspects of the mauri of a water body are defined, and how resource users will be able to identify and mitigate adverse environmental effects of an activity on the mauri of a water body. They therefore seek that the elements of mauri are better defined and that clarity is provided as to what will need to be demonstrated in an environmental effects assessment. Similarly, Phoebe Irrigation Ltd (Submitter 86) seeks a redrafting of Policy 2.6 to enable a quantitative measurement of mauri to be established, and New Zealand Fertiliser Manufacturers' Research Association Inc (Submitter 87) seeks that an additional definition or context is provided around the practical application of the nutrient concentration objectives to the concept of mauri of water.

778. I note that there is also some support for the provisions as currently drafted.[72]

779. Te Rūnanga o Ngāi Tahu and others (Submitter 116) also seek minor wording amendments to the definition of mauri as follows:

> *" The elements of physical health which Ngāi Tahu use to reflect the status of mauri and identify the enhancements needed include, but is not limited to:*
>
> - *Aesthetic qualities….."*

780. In terms of the provisions of the RMA, I note the following matters that are relevant to this discussion:

a. Under s6 (matters of national importance), the Council is required to "*recognise and provide for",* as a matter of national importance:

> *"(e) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga"*;

b. Under s7 (other matters), the Council is required to "*have particular regard* to":

> "*(a) Kaitiakitanga"*

c. Under s8 (Treaty of Waitangi), the Council is required to "*take into account*" the principles of the Treaty of Waitangi/Te Tiriti o Waitangi.

781. I also consider Objective D1 and Policy D1 of the NPSFM to be relevant to this matter. These direct that local authorities are to provide for the involvement of iwi and hapu in freshwater management through taking reasonable steps to involve iwi and hapu, working with them to identify tangata whenua values and reflecting these in water management decision-making.

782. With respect to the definition of mauri, it is my view that as this is a Maori term, it is always going to be difficult to 'define' it in the sense of providing a European meaning to an indigenous concept. I also have concerns that trying

[72] Department of Conservation, Ms Shand, Te Rūnanga o Ngāi Tahu and others, Royal Forest and Bird Protection Society and Ms Sage (Submitters 90, 91, 116, 136 and 139), for example, support Policy 2.6 and seek its retention.

to define the concept in European terms, runs the risk of diluting or restricting its real meaning. As such, it is my view that it is appropriate for the definition to reflect to the concept of mauri in a general sense, and that amending the definition as sought by the Rūnanga (Te Rūnanga o Ngāi Tahu and others Submitter 116) is appropriate, particularly given the direction in the RMA, and the NPSFM, both set out above.

783. It is my view that such an approach is also consistent with the PRPS which defines mauri as *"Life supporting capacity, spiritual essence";* and the NRRP, which in Chapter 4 (Water Quality) defines mauri as meaning the: "*essential life force or principle; a metaphysical quality inherent in all things, both animate and inanimate*". This, in my view, relates to a *qualitative* assessment, not a *quantitative* one, the latter appearing to be sought by some submitters on the HWRRP. Chapter 5 of the NRRP also states that some of the tangible features that contribute to the mauri of a river are the natural variability of river flows, as well as the ability for the river to cleanse itself; again this is not an all-inclusive definition of what makes up mauri, and again, it is my view that the HWRRP is consistent with this.

784. I also note that the following in-depth discussion of mauri, and how it relates to the management of natural and physical resources, is contained in Chapter 2 of the PRPS, *'Issues of Resource Management Significance to Ngāi Tahu*':

> *2.2.3 Mauri - The overall purpose of resource management for Ngāi Tahu is the maintenance of the mauri of natural and physical resources, and to enhance mauri where it has been degraded by the actions of humans*.
>
> *For Ngāi Tahu, mauri is the life force that comes from wairua – the spirit, or source of existence and all life. Mauri is the life force in the physical world.*
>
> *As a life principle, mauri implies health and spirit. In the environment, mauri can be used to describe the intrinsic values of all resources and of the total ecosystem. In the community, mauri is of paramount importance to the well-being of the people. Mauri can be harmed by the actions of humans but is unaffected by natural processes such as natural disasters.*
>
> *The preservation of the mauri of natural resources is paramount to Ngāi Tahu to ensure that resources may be used sustainably by present and future generations. Traditionally, rules were established to govern the use of natural and physical resources, and to ensure that the mauri was protected from human actions. These rules form part of kawa and tikanga (Māori protocol) and have been passed on through the generations. For example, a rāhui may be used to safeguard the mauri of a particular resource, by enforcing a temporary restriction on use of the resource to protect the overall health and availability of the resource both for present and future generations. Section 5(1) of the RMA seeks these same outcomes; to promote the sustainable management of natural and physical resources.*
>
> *There are indicators within the environment, both physical and spiritual, that Ngāi Tahu use to reflect the status of mauri. Physical indicators of the health of mauri include, but are not limited to, the presence of healthy mahinga kai and other indigenous flora and*

fauna, the presence of resources fit for cultural use, and the aesthetic qualities of resources such as the visibility of important landmarks. Spiritual indicators are those from the atua (gods), which can take many forms and are recalled in the kōrero pūrākau (stories) of whānau and hapū.

785. Again, it is my view that the definition of mauri in the HWRRP, (as amended by the changes sought by Te Rūnanga o Ngāi Tahu and others [Submitter 116]) is consistent with this discussion in the PRPS.

786. While I acknowledge that this does not resolve the concerns of some submitters as to what needs to be provided and demonstrated in an environmental effects assessment in relation to effects on mauri, in my experience, such an assessment and determination is most appropriately conducted as part of a cultural impact assessment, undertaken by a specialist, or through consultation. While I appreciate that there are costs associated with such an assessment, it is my view that such an assessment is unlikely to be required for smaller consent applications, and is unlikely to be a significant cost for larger consent applications which will require multiple technical assessments. In my view, such as assessment would be an effective way to address impacts on mauri and is a necessary part of recognising and proving for the relationship of Maori with these rivers, gives appropriate regard to kaitiakitanga, and gives effect to Objective D1 and Policy D1 in the NPSFM. I also note that such as assessment is specifically required as a standard and term under proposed Rules 3.1(g) and 3.2 (h).

787. In considering whether the current wording of the objectives is the most appropriate, or whether changes sought by various submitters is more appropriate, I have also had regard to the relevant provisions of the PRPS. Objective 7.2.1 seeks that fresh water resources are sustainably managed to enable for a number of matters, providing that "*the life-supporting capacity, ecosystem processes, and indigenous species and their associated freshwater ecosystems, and* ***mauri*** *of the fresh water is safe-guarded"* (emphasis added). Similarly, Policy 7.3.4 which directs that the abstraction of surface water and groundwater is managed by establishing environmental flow regimes and water allocation regimes which protect mauri.

788. The Objective therefore requires that mauri is **safe-guarded**, with the Policy requiring that flows, freshes and flow variability are **protected** in order to ensure that mauri is safe-guarded. Although safe-guarding is not defined in the RMA, its plain and ordinary meaning is to protect from harm. In my opinion, protection of anything, including mauri, does not necessarily mean however, "no effects"; rather protection involves ensuring that the integrity of something is maintained. In this context, I consider it important to bear in mind that mauri, in my view, is essentially a qualitative concept. As such, while there may be effects from an activity on some of the factors defined in the HWRRP as being elements of physical health that reflect mauri, that can be quantitatively measured, this does not necessarily mean that such effects adversely affect mauri. For example, while the depth and velocity of the river flow may change, this in itself, as I understand the concept of mauri, does not automatically mean that the mauri is compromised. I therefore do not agree that seeking to 'protect', or to 'maintain and enhance' mauri is a "no effects" threshold. In this regard, I agree with Amuri Irrigation Company Ltd (Submitter 83) that the appropriate test is whether the effects of an activity are 'acceptable', including through appropriate mitigation or remediation measures. It is my view however, that the wording of the objectives and

policies are consistent with this, in that if the effects are acceptable, mauri will be protected.

789. For similar reasons, I do not agree that it is appropriate to only require 'recognition' of mauri. Recognition, in my view, does not provide the same positive protection and would therefore not be strong enough to ensure the safe-guarding of mauri, and as such would be inconsistent with the PRPS. In my view, it is not a more appropriate way to meet the purpose of the RMA, when considering s5(2)(b), s6(e) and s(7)(a).

790. I have also considered whether it is more appropriate for the relevant provisions to refer to only "significant" adverse effects, or to all adverse effects/impacts. Firstly, I agree with Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) in a general sense that avoiding any adverse effects can make an objective unachievable. However, I again note that in relation to these provisions, it is my view that what is sought is not no effects or impacts, but no effects or impacts that result in mauri being compromised. For completeness I also note that it is my view that the proposed wording does not foreclose the ability for adverse effects to be avoided, remedied or mitigated, such that these measures ensure mauri is protected[73].

791. Importantly, I note that my view is based on the idea that elements that contribute towards mauri can be affected by a proposal, but that if these effects are not significant (or cannot be adequately avoided, remedied, or mitigated), then mauri will not be adversely affected. If however, this is not correct, and any adverse effects on these elements are likely to automatically affect mauri, then in my view, and taking into account the overall broad judgement required under s5 of the RMA, it may be more appropriate for the relevant provisions to be amended.

21. Permitted Activities

21.1 Small-Scale Takes and Diversions

792. Proposed Rules 1.1 – 1.4 provide for small-scale diversions and water takes as permitted activities, subject to a number of conditions.

793. Proposed Rule 1.1 allows for the diversion of surface water as a permitted activity in Zone B on Map 3, or in Zones A and C for the purpose of maintaining, repairing or replacing existing infrastructure. Fonterra Co-operative Group Ltd (Wellington) and Dairy NZ Inc (Submitters 100 and 134) support this rule. A number of submitters[74] seek the deletion of this rule in its entirety, with the consequential effect being that the activity will require consent, on the basis that the diversion of up to 60% of the flow (condition (a) of the rule) could have adverse effects that are not adequately addressed in

[73] I also note that changes are recommended in relation to the stem of Objective 2 that reflect this.

[74] Water Rights Trust Inc, Department of Conservation, Whitewater Canoe Club Inc and Whitewater New Zealand Inc, Mr Fox, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 48, 90, 95, 109, 113, 136).

the conditions to the rule. For similar reasons, Ms Sage (Submitter 139) seeks that Rule 1.1 is amended such that the activity status is controlled for maintenance or repair of infrastructure, with the diversion standard reduced from 60% to 20%, or restricted discretionary for replacement of infrastructure. Ms Shand (Submitter 91) objects to anything in Zone C being a permitted activity.

794. I note that the conditions proposed include that the water is not diverted out of the riverbed; that surface water flow remains continuous; the water is not diverted away from a lawfully established point of take; that the diversion does not exceed 15 days per year; and the quality of the water discharged is the same or better quality as when it is diverted. The rule allows for diversions to occur, within these standards, as a permitted activity. This allows for activities like bridge repairs to take place without resource consent in any area covered by the HWRRP, and for diversions for other activities to occur in Zone B, being those areas identified as being suitable for the development of water storage infrastructure.

795. I generally consider that permitted activity status is not appropriate where an activity might have effects that are of such a scale and significance that they should be considered through a consent process. As such, it is my view that the conditions within the rule should ensure that any adverse effects that might arise from the activity are adequately addressed. For example, any water quality matter that might otherwise arise from a diversion being put in place is addressed through condition (f). Further, it is my view that any effects of the diversion are temporary, as they are limited to 15 days in any 12 months period.

796. A more precautionary approach is also taken in relation to Zone A (those areas identified as having 'high value' and not suitable for water storage infrastructure), and Zone C, (areas where only limited investigations have been carried out as to whether infrastructure development is appropriate). In addition, it is my view that the *effects* from maintenance of infrastructure or its repair are unlikely to be different from the effects of the infrastructure being replaced, and therefore I do not consider a distinction in the rule between these to be necessary.

797. Mr John Talbot (Submitter 1) seeks that condition (f) of Rule 1.1 is clarified as to why discharge and take are part of the condition or alternatively that the condition is deleted. In my view, the condition is appropriate and does not require clarification, as a diversion still has a point of 'take', where the water is diverted from, and a point of 'discharge' where the water is returned to the water body.

798. Proposed Rule 1.2 provides for the taking and using of surface water for the purpose of maintaining, repairing or replacing existing infrastructure, subject to meeting a number of conditions, as a permitted activity. It is my understanding that this Rule is intended to allow for activities such as cooling machinery. Fonterra Co-operative Group Ltd (Wellington) and Dairy NZ Inc (Submitter 100 and 134) supports this rule. A number of submitters[75] consider that the blanket rate of take of 10l/s under condition (a) could have significant adverse effects on streams which have a MALF of 500l/s or less, and seek

[75] Water Rights Trust Inc, Department of Conservation, Fish and Game New Zealand and Royal Forest and Bird Protection Society (Submitters 48, 90, 113 and 136).

that the rule is amended to require compliance with the table proposed under Rule 1.3(a). Similarly, Ms Sage (Submitter 139) seeks amendments to the rule to change the status to controlled for abstraction for maintenance and repair, or restricted discretionary for replacement of infrastructure, and a reduction in the length of time such a take can occur over, from 60 to 15 days. Ms Shand (Submitter 91) also considers that the 60 day limit is too long and that too much water is allowed.

799. In relation to the amount of water allowed under this rule (10l/s and 40m^3/day), I note that the volumes proposed in Rule 1.3(a) are for permanent takes, whereas Rule 1.2(a) is limited to no more than 60 days per annum, and is therefore for temporary takes only. In addition, condition (d), in my view, avoids adverse effects on instream values that might arise from such a temporary take because the take must cease when the minimum flow is reached.

800. Mr Talbot (Submitter 1) seeks that condition (d) of Rule 1.2 refer to a valid minimum flow site, as some takes will occur in reaches of rivers which do not have a downstream minimum flow recorder site. It is my view that this can be addressed through using similar wording to that proposed in condition (g) of Rule 1.3. Therefore I recommend that condition (d) of Rule 1.2 is reworded as follows:

> "*(d) the take shall cease when the flow in the river is:*
>
> *(i) A~~a~~t or below the minimum flow ~~at the closest minimum flow recorder site downstream of the take~~ in the Environmental Flow and Allocation Regime in Table 1 for that water body; or,*
>
> *(ii) At or below the minimum flow for the mainstem of either the Hurunui or Waiau River, depending on the catchment that the take is located in, for takes from any water body not listed in the Environmental Flow and Allocation regime in Table 1.*

801. Proposed Rule 1.3 provides for the taking or diverting and using of water from a surface water body, as a permitted activity, subject to meeting a number of conditions. These include a maximum rate of take (condition (a)) which differs depending on the MALF. A number of submitters[76] support this rule. Ms Shand (Submitter 91) considers that the permitted activity level is set too high and does not apply the precautionary principal. In this regard I note that the amounts proposed in condition (a) are consistent with Rule WQN1 in the NRRP. It is my understanding that through the NRRP, these levels for small-scale takes were determined to have effects that were of an acceptable level of scale and significance to justify a permitted activity status. As such, it is my view that the approach taken is sufficiently precautionary.

802. In relation to condition (b), Federated Farmers of New Zealand (Submitter 123) notes that the thresholds proposed are less than those in the NRRP and seeks that the rule be amended so as to be consistent with the NRRP, or the

[76] Water Rights Trust Inc, Department of Conservation, Fonterra Co-operative Group Ltd (Wellington), Fish and Game New Zealand and Dairy NZ Inc (Submitters 48, 90, 100, 113 and 134).

inconsistency justified. I note that under Rule WQN1 of the NRRP, where the MALF is unable to be calculated, the maximum rate of take is 5l/s, with a maximum volume of 10 cubic metres per day. Condition (b) provides for 0.5l/s and $2m^3$/day. However, I note that in both the HWRRP and the NRRP, those rivers/stream with a *known* MALF of less than 100l/s, are restricted to rate of 0.5l/s and $2m^3$/day, consistent with part (b). I have been advised by Dr Smith, that the rivers or streams to which Rule 1.3(b) would apply have a flow much smaller than 100l/s, even if the exact flow cannot be reliably calculated. As such, in my view it would be inappropriate for the default NRRP takes to be applied, which could result in these streams running dry, and which would be inconsistent with the rates applied to rivers/stream with a *known* MALF of less than 100l/s.

803. Te Rūnanga o Ngāi Tahu and others (Submitter 116) also seek that it is made explicit in the rule that it does not cover artificial water courses such as irrigation canals which are provide for in Rule 1.4. I note in this regard that Rule 1.3 pertains only to a "surface water body", and my understanding is that this does not include artificial water courses of the kind referred to in Rule 1.4[77]. In my view, in order to address the submitter's concerns and provide clarity, that condition (c) of Rule 1.3 should be removed. The submitter also seeks that it is made clear whether the rates/volumes set out within Rule 1.3 (a) are to include the taking, diversion and use of water for domestic and stockwater. However, it is my view that the condition is sufficiently clear that it applies to all takes, including domestic or stockwater, because the condition does not exclude this. This differs from condition (g), whereby that condition specifies an exclusion for domestic or stockwater or a community water supply.

21.2 Takes from Irrigation Canals

804. Rule 1.4 allows, as a permitted activity, for the taking or diversion of water from an irrigation canal, hydro-electric canal or water storage facility, provided written permission is obtained from the consent holder for the canal or facility to do so, and provided fish are prevented from entering the intake if not already prevented at the initial point of take.

805. Water Rights Trust Inc (Submitter 48) seeks that this rule is deleted or made discretionary, on the basis that there is no limit to the rate or volume of take, which might then be used for an activity not contemplated when the initial consent was granted, and as such, could have significant adverse effects not anticipated at that time. Ms Sage (Submitter 139) also seeks that the activity status is amended to discretionary, and that a new performance standard is included within the rule to require compliance with the nutrient limits, in order to assess land use intensification and consequential effects in water quality. Fish and Game New Zealand (Submitter 113) seeks that the rule explicitly states that such permitted takes would still need to comply with the original consent.

[77] This is on the basis that while a 'surface water body' is not defined in the HWRRP, a 'water body' is defined in the RMA as a "*fresh water or geothermal water in a river..."* and the definition of 'river' excludes "*any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal)".*

806. Meridian Energy Ltd (Submitter 80) supports the proposed rule on the basis that it will efficiently enable the use of such canals or facilities for multiple uses, where agreement is reached between the parties to do so, without the need for an additional consenting process. The rule is also supported by Fonterra Co-operative Group Ltd (Wellington, Federated Farmers of New Zealand, Hurunui Water Project Ltd, and Dairy NZ Inc (Submitters 100, 123, 127 and 134).

807. It is my view that the point raised by Fish and Game New Zealand (Submitter 113), in effect addresses the concerns raised by Hydrotrader Ltd and Ms Sage (Submitters 47 and 139), that allowing for multiple uses of these canals or facilities could result in effects not anticipated at the time of the initial grant of consent. It is my view, and as noted by Fish and Game New Zealand (Submitter 113), that the permitted status for this further take or diversion does not supersede the requirement for the initial consent to be complied with, and as such the further take/diversion would still be required to be within the parameters of the original consent, and therefore not extend beyond the effects considered at the time of the grant of the original consent. Condition (a) in effect covers this, as the original consent holder should not be giving written consent for another party to do something outside their consent terms.

808. It is my view that given the further take/diversion will be within such parameters, a permitted status is appropriate to enable the efficient use of water, and is a more appropriate way to achieve the objectives of the Plan than a discretionary status. Further, while I agree with Fish and Game New Zealand (Submitter 113) that the further take/diversion will need to be within the parameters and conditions of the initial consent, it is my view that this does not need to be explicitly stated as a term within the rule itself.

809. In relation to including a performance standard in the rule which requires compliance with nutrient limits, it is my view that this is a matter already covered by other provisions in this HWRRP, namely through rules 10.1, 10.2, 11.1 and 11.2, which address the effects of land use on water quality. It is therefore my view that meeting the permitted activity standards under Rule 1.4 does not negate the requirement to comply with these land use rules, and therefore a further requirement within Rule 1.4 is not necessary.

21.3 Small Storage Dams

810. Rule 1.5 provides for the damming of water in Zone B on Map 3 as a permitted activity, subject to compliance with a number of conditions. Hurunui District Council (Submitter 88) supports this rule.

811. Te Rūnanga o Ngāi Tahu and others (Submitter 116) considers that condition (d), which requires that the dam structure itself is permitted under rules BLR3 and BLR4 of the NRRP, be deleted, but incorporated into condition (e), on the basis that the NRRP rules referenced pertain to structures within the bed of rivers and streams, and as such, an out of stream small scale dam such as a paddock pond would automatically not comply with the condition. It is my view that the changes sought by the submitter are appropriate.

812. Condition (e)(i) requires that where the damming of water is within the bed of a surface water body, the MALF is less than 5l/s. Federated Farmers of New Zealand (Submitter 123) notes that this is less than the level of 200l/s permitted in the NRRP and seeks that the flows are consistent. Firstly I note

that under Rule WQN25 of the NRRP, the restriction to 200l/s referred to by the submitter pertains to "*the mean annual flow of the river*", and not the MALF. Secondly, I consider that it is important to remember that the rule provides for a permitted activity standard, i.e. one where no consent is required, and while the conditions of the rule must be met, there is no ability for the Council to require additional conditions. A river with a MALF of 200l/s is a relatively large water body (for example the Waipara River has a MALF of around 100l/s) and the damming of up to 25% of its total catchment area is likely to have effects that require greater consideration, in my view, through a consent process. The permitted activity level is intended to allow for damming of much smaller water bodies where the effects are not considered to be of such scale and significance that require consideration through a consent process.

813. Condition (e)(ii) requires that where the damming of water is within the bed of a surface water body, fish passage of indigenous fish and other migratory species in maintained. Ngāi Tahu Property Ltd (Submitter 121) raises concerns that this, and other provisions in the Plan, do not use consistent terms. I agree that it is appropriate, for the purposes of clarity, to provide for consistent terms, and as such, recommend that the condition is reworded.

814. Condition (e)(iii)(a) requires that the catchment area above the dam does not exceed 100ha. This is opposed by Mr Pain and Mr and Mrs Daly (Submitters 24 and 66) on the basis that a greater area is required to recharge a dam. Again, it is my view that it should not be overlooked that this rule provides only for a permitted activity status; it does not preclude an application being made for a proposal involving a larger catchment area, which under Rule 2.4 would be a restricted discretionary activity (subject to meeting the specified standards and terms). In my view, this is appropriate as it allows for consideration and management of effects where they are expected to be greater. I also note that this threshold is consistent with the permitted activity conditions in the NRRP (Rule WQN25, condition 1).

815. Condition (e)(iii)(b) requires that in total, no more than 25% of the total catchment area from the confluence of the tributary with the mainstem of the Hurunui or Waiau Rivers is dammed. Phoebe Irrigation Ltd (Submitter 86) supports the intent behind this rule but considers that it may be difficult to ascertain when the threshold has been exceeded and seeks that better guidance be provided within the rule to address this. It is my view that this is an important consideration, but one that should be addressed through monitoring and record-keeping, rather than one that can be addressed through the rule itself.

816. Federated Farmers of New Zealand (Submitter 123) considers that the reason for the area constraint is not clear. As with similar comments above, it is my understanding that the restriction is intended to provide for a permissive approach to small-scale dams that are expected to have effects which are of such a scale and significance that they should be considered through a consent process. Without such a restriction, potentially a whole catchment could be dammed, resulting in streams having very low flows. While the adverse effects from a greater area of a catchment being dammed may be able to be suitably avoided, remedied or mitigated, the proposed condition provides for a level beyond which this is to be tested through a consent process. It is my view that such an approach is necessary to achieve the environmental objectives of the Plan, whilst providing for smaller-scale

damming with lesser effects as a permitted activity, thus achieving the development objectives of the Plan.

817. Ms Shand (Submitter 91) considers that the amount of water that may be impounded is too large to be a permitted activity, and that this level of impoundment should be publicly notified. It is my view that whether or not 20,000m^3 is a "large" amount is in itself not the relevant consideration; rather the relevant consideration are the effects of such impoundment. In this regard, I note that there are a number of additional conditions prescribed in the rule that a proposal will also have to meet. In combination, these are expected to ensure that the effects of a proposal that meet such conditions will not be of such scale and significance that require greater scrutiny through a consent process. I note that the submitter has not indicated what the effects are of the impoundment of this amount of water, that have not been addressed through the proposed conditions to the rule, that require a greater level of scrutiny.

818. Ms Sage (Submitter 139) seeks that additional performance standards are included in order to implement with water quality thresholds in Policies 5.1-5.3, and seeks that the activity status be discretionary for proposals that comply with the conditions, or prohibited if they do not. This is on the basis that the permitted activity status does not provide for assessment and consideration of adverse effects of damming on natural character, life supporting capacity of rivers and aquatic ecosystems and other Part 2 matters. The submitter considers that the CWMS and ZC processes were to help identify where water storage might be able to occur while addressing these matters, to identify proposals with least potential environmental impact and greatest economic benefit, and was not intended to establish a permissive planning regime for new dams and diversions as these involve destruction of natural character.

819. It is my view that the avoidance of significant adverse effects on natural character, the life supporting capacity of rivers and aquatic ecosystems has been considered in the proposed framework. The permitted activity status only applies to areas within Zone B, which are not areas identified as having high values. Areas with high values are identified as Area A, and the permitted activity rule does not apply to these higher value areas. The submitter correctly notes that the CWMS and ZC processes identified where water storage might be able to occur, and that this process has resulted in the identification of the 3 Zone hierarchy.

820. The planning framework seeks to reinforce this hierarchy through its objectives and policies and implement these through appropriate rules. In order to achieve the overriding objectives of the Plan, the rule and policy framework need to encourage, whilst not compromising other objectives in the HWRRP, development of water storage in the Zone B areas. In my view, a discretionary status for proposals within Zone B is unlikely to encourage development proposals. It is also, in my opinion, likely to result in increased costs for proposals for relatively small-scale dams. It is therefore my opinion that in order to encourage appropriate development of this nature within Zone B, a relatively permissive approach needs to be retained. However, in order to ensure that other objectives of the HWRRP are met, the conditions associated with the permitted activity status need to be robust. It is my view that unless the proposed conditions are shown not to adequately address the adverse effects anticipated from this type of activity, a more stringent activity status is not required.

821. One alternative approach, which would encourage this type of development in these areas, whilst maintaining a greater level of control for addressing adverse effects, would be to amend the activity status to controlled. I note that this would result in increased costs to applicants in terms of having to apply for consent. In my view however, this would only be appropriate if the proposed conditions to the rule were not expected to adequately address adverse effects. In this regard I note that although not identical, the conditions proposed under Rule 1.5 are similar to the permitted activity conditions in the NRRP.

822. With respect to including a performance standard in the rule which requires compliance with water quality thresholds (as sought by Ms Sage (Submitter 139), I again note that this is a matter already covered by other provisions in this HWRRP, namely through Rules 10.1, 10.2, 11.1 and 11.2, which address the effects of land use on water quality. It is therefore my view that meeting the permitted activity standards under Rule 1.5 does not negate the requirement to comply with these land use rules. It is my view that a dam in itself will not affect water quality; rather a dam may allow for a change in land use to occur that may in turn increase the discharge of nitrogen or phosphorous that may enter water. In the event that this occurs as a result of the dam, Rules 10.1 and 10.2 would need to be met, or otherwise consent would be required under Rule 11.1 or 11.2.

823. Related to this, Mr Michael Barton (Submitter 78) seeks that allowance be made to collect and store water in the Waikari area, where water can harvested in winter months from streams that run dry in summer. The Submitter seeks this on a case by case basis and considers that collecting flood run-off is the most sustainable form of collecting water. It is my view that no changes are required to the HWRRP in this regard, as the Plan provides a framework for consideration of the type of storage discussed in submission, either as a permitted activity under Rule 1.5, or, on a case-by-case basis for larger scale storage facilities (20,000m^3) within Zone B (within which the Waikari area is located), under Rule 2.4.

22. Jed Catchment

824. The HWRRP covers the catchments of the Hurunui, Waiau and Jed Rivers. Policy 2.11 pertains specifically to the Jed River Catchment and provides that resource consents not be granted to take, dam or use water in this catchment, unless the proposal meets the requirements within this policy. The policy is:

> "*No resource consent to take, dam or use water should be granted in the Jed River catchment unless it can be demonstrated that the activity will not:*
>
> *(a) increase the length or duration of the dry reaches in the Jed River, and its tributaries and coastal streams within this area;*
> *(b) reduce the movement or passage of native fish;*
> *(c) reduce water quality; and,*
> *(d) adversely affect flows at the Jed River mouth at Gore Bay which could affect the naturally occurring biota or the intrinsic, natural, amenity and cultural values*."

825. This policy in turn is to achieve Objective 2 which aims to manage water levels and flows in the Jed River, while not resulting in adverse impacts on a number of factors listed in the objective. Hurunui District Council and Department of Conservation (Submitters 88 and 90) support this policy. Mr and Mrs Daly (Submitter 66) seek that the policy be deleted, and left up to "normal consenting criteria", because of the limited information that is known about flows, water quality and the passage of native fish. It is my view that deletion of the policy in its entirety would not achieve the overarching objective, nor would it assist decision makers in a consenting process, because the policy provides criteria against which to assess consents.

826. It is my understanding based on the evidence of Dr Smith, that there is much less information known about the Jed catchment than the Waiau and Hurunui catchments. As noted by Dr Smith, limited gauging has been completed on the Jed River and it was not possible to identify a representative primary flow recorder site in order to model flows. In his opinion, to evaluate the effects of storage, further investigation would be required, that has not been possible in the HWRRP timeframe. A precautionary approach has therefore been taken to the management of activities within this catchment, given that there is currently insufficient information about the effects that taking, damming and using water in this catchment might have and whether the effects can be mitigated. For this reason, the approach taken in the HWRRP is to include the Jed catchment within Zone C, which is categorised as being an 'Areas not identified as High Value or Infrastructure Development'. Under Rule 4.3, the taking, using, damming and diverting of water within the catchment, not authorised as a permitted activity, is non-complying. A number of submitters oppose this approach, seeking rather that the Jed catchment is included within Zone B, being 'Infrastructure Development Areas'[78].

827. As an alternative to this, Hurunui District Council (Submitter 88) seeks that that the Jed River Catchment is provided for as an alternative zone (for example 'Zone D') where the taking, diverting and / or damming of water in the Jed River catchment for water storage purposes may be undertaken in the catchment as a discretionary activity, in accordance with the criteria set out in Policy 2.11, and subject to appropriate research and investigation to determine the extent to which storage activities may impact on the values of the Jed River. Further to this, Mr H Pain (Submitter 24) considers that a dam would provide positive benefits in the form of a better environment for native flora and fauna than currently with its tributaries often running dry.

22.1 Statutory Context

828. It is my view that the Policy 7.3.12 in the PRPS is relevant to the consideration of this matter, which directs that a precautionary approach is to be taken to the allocation of water for abstraction, the damming or diversion of water, in circumstances where the effects of these activities on fresh water bodies, are unknown or uncertain.

[78] Mr H Pain, Port Robinson Informed Citizens Inc, Mr S Pain, Mr and Mrs Daly, Mr Paterson, Mr McNabb, Hurunui District Council and Mr Wiesen and Ms Noering (Submitter 24, 51, 63, 66, 75, 77, 88 and 135).

22.2 Discussion

829. It is my view that it is not appropriate to move the Jed catchment to the Zone B area, because this would not implement Policy 2.11. Given that some submitters do oppose this policy, I also note that it is my view that even without this policy, given the lack of information about this catchment, it is difficult to conclude that including the Jed Catchment in Zone B will achieve Objective 2. It is also my view that such an approach would be inconsistent with Policy 7.3.12 of the PRPS, as set out above.

830. In my opinion, the important question is whether a non-complying or a discretionary activity status is the most appropriate way to implement Policy 2.11 and ultimately achieve the objectives of the HWRRP. Under section 104D of the RMA, before a resource consent for a non-complying activity can be granted, it must first be determined that that adverse effects of the activity on the environment will be minor or that the proposal will not be contrary to the objectives and policies of the plan. In my view, aside from this 'threshold test', the ultimate consideration of whether or not to grant consent to a proposal is unlikely to differ whether it is a non-complying or discretionary activity status, and ultimately consideration of a discretionary activity will include the scale of adverse effects as well as consistency with plan provisions, just as with a non-complying activity.

831. However, from a practical point of view, and in my experience, a non-complying activity status is often used for an activity that is generally not anticipated by the Plan, such as one that is considered unlikely to meet the plans' policy outcomes or one that is expected to have significant adverse effects. In my view, while there is little information on the Jed Catchment, it is also not certain that either of these apply. Further, Policy 2.11 anticipates that activities in the catchment may be appropriate, provided that they do not result in the factors listed in the policy occurring. Therefore my view is that the discretionary activity status is more appropriate to implement the Plan's policies and objectives. This is because Policy 2.11 is quite clear that consent should not be granted if the matters within that Policy are not addressed. The onus is therefore on an applicant to demonstrate how any proposal achieves the Plan's outcomes and addresses those matter listed in the Policy. In my view the discretionary status provides greater certainty that if these matters are addressed, consent can be granted.

832. I also note that currently, being in Zone C, Policies 6.3 and 6.4 also apply to the Jed Catchment. Policy 6.3 seeks to enable proposals within Zone C provided that they meet the list of criteria. I note that the majority of these criteria apply only to the Hurunui and Waiau River catchments. Policy 6.4 directs that damming is avoided in this zone until two years after the HWRRP is notified or it has been demonstrated that opportunities for water storage in Zone B are not able to proceed. The reason for this policy is so that damming within the areas within Zone C that are considered more sensitive does not proceed unless the areas identified as being more appropriate for infrastructure development (Zone B) have been shown to be unviable. It is my view that applying these policies to the Jed Catchment is not the most appropriate way to achieve the plan's objectives. This is because, in relation to Policy 6.3, having an additional policy specific to the Jed Catchment (Policy 2.11), as well as Policy 6.3, would be inefficient. In my view, Policy 2.11 covers the matters of relevance relating to the Jed Catchment; and if there

are some relevant matters in Policy 6.3 not covered in Policy 2.11, they can be replicated in Policy 2.11.[79]

833. In relation to Policy 6.4, it is my view that the same circumstances do not apply to the Jed Catchment, in that less is known about the area's environmental and cultural values, than in other parts of Zone C. In this regard, if further investigations show that these values can be appropriately addressed by a proposal, I do not consider it necessary for the 2-year deferral or the requirement to exhaust Zone B options to be appropriate. If however, it is determined through further investigations that effects of a damming proposal cannot adequately avoid, remedy or mitigate the adverse effect on the catchment's environmental or other values, it is my view that the proposal would be unlikely to succeed when considered against Policy 2.11.

834. It is therefore my view that the most appropriate way to address all these matters, and achieve the objectives of the Plan, is to include the Jed River Catchment in an alternative zone (Zone D), as suggested by Hurunui District Council (Submitter 88), and amend Rule 4.3 so that the taking, diverting and damming of water in the Zone is specified as a discretionary activity. Amendments would then be required, to provide clarity, to Policy 2.11 (so that it refers to Zone D), and the explanations in the Plan relating to the various zones. The recommended wording is set out in **Appendix 2**. It is my view that this is the most efficient and effective approach to achieving the relevant objectives of the Plan. Further, I consider that given the limited information known about this catchment, this approach is sufficiently cautionary, and as such is consistent with Policy 7.3.12 of the PRPS.

835. Related to this matter, Mr V J & Mrs Daly (Submitter 66) disagree with explanatory paragraph in '*The Resource Management Issues'* section of Part 1 of the HWRRP, which pertains to the Jed River. As a response to this, I recommend the following minor wording change that have been suggested by Dr Smith:

"*The Jed River and a number of tributaries such as the Waitohi, Waikari, Leader and Mason Rivers receive water from foothills catchments. ~~These rivers often flow sub-surface for part of their length in part of the year.~~ <u>During dry periods, surface water flow in some of these rivers may be absent for part of their length</u>*".

Caroline Stream

836. Cheviot Ward Committee, Mr V J & Mrs Daly, Mr James Paterson, Hurunui District Council (Submitters 46, 66, 75 & 88) also note that on Map 3 (B2), the area encompassing the Jed Catchment includes the Caroline Stream, and seek that this boundary is amended to follow the catchment boundaries. In

[79] My view is that none are relevant that are not already included in Policy 2.11, but this is based on an assumption that there are limited water-based recreational sites, opportunities and experiences within this catchment (part (k) of Policy 6.3), and because Policies 1.3 and 1.4 which seek to allow for additional allocation for future community or stock drinking water supplies, do not apply to the Jed Catchment, that there is not the same necessity to allow for these supplies ((g) and (h) of Policy 6.3).

my view this boundary amendment is appropriate as it will reflect catchment boundaries and better assist in implementing Policy 2.11.

23. Hanmer River

837. The Hanmer River is contained within Zone C, categorised as being 'Areas not identified as High Value or Infrastructure Development'. A flow regime comprising a minimum flow and an A Block allocation is included in Table 1 for the Hanmer River. The damming of water is only provided for as a permitted activity under Rule 1.5 or a restricted discretionary activity under Rule 2.4 (and subject to various standards and terms) in Zone B. The damming of more than 20,000m^3 of water is a non-complying activity under Rule 4.1 in Zone C, or otherwise a non-complying activity under Rule 4.2.

838. Mr Roger Smith (Submitter 21) and Hurunui District Council (Submitter 88) seek that the Hanmer River catchment be included in Zone B, in order to enable development of water storage within this sub-catchment. Hurunui District Council (Submitter 88) considers that the potential effects on storage on the Hanmer River are unknown given the lack of information on the characteristics of the sub-catchment. Similar to their submission on the Jed Catchment, they seek, as an alternative, that the Hanmer River sub-catchment is included within an alternate zone that provides for storage as a discretionary activity, subject to appropriate investigations. In either case, they seek a new policy specific to the Hanmer River that includes criteria relating to safeguarding water quality, quantity and in-river values. Mr Smith (Submitter 21) seeks the change on the basis that the consenting process for creating water storage ponds on private land should be simple, complying and low cost to encourage use of storage to increase irrigated land.

839. In my view, the Hanmer River is different to the Jed Catchment (discussed in a separate section), and large scale storage in the South Branch and Lake Sumner. Firstly, unlike the Jed Catchment, a water allocation regime for the Hanmer River is provided for in the HWRRP, and therefore water takes within this regime are provided for as a restricted discretionary, rather than non-complying activity. I also note that there is no separate policy for the Hanmer River. Secondly, the Hanmer River is not listed as a high naturalness water body in the NRRP, and as such, damming of the river is currently provided for in the NRRP as either a permitted, restricted discretionary or discretionary activity (under Rule WQN25). I also note that the areas not supported for water storage in the ZIP do not include the Hanmer River.

840. It is my view that a separate policy for this river is not necessary in order to achieve the objectives of the Plan; rather the question is whether the Hanmer River is better located within Zone B, and subject to rules which seek to implement Policy 6.2, or Zone C, and subject to rules which seek to implement Policy 6.3. It is my view that the former is more appropriate as I am not aware of any reason why a higher level of regulation is necessary for the Hanmer River in order to achieve Objective 6, given it is not identified in the NRRP as a high naturalness water body. I also consider that this approach is consistent with the ZIP. I therefore recommend that Map 3 (Development Zones) is amended to include the Hanmer River sub-catchment in Zone B.

841. Related to this, I note that Hurunui District Council (Submitter 88) seeks that upper catchment alpine rivers are defined or identified. As the submitter's

concerns in this regard appear to relate to the Hanmer River, the recommended amendments discussed above are considered sufficient to address the submitter's concerns without requiring further amendments.

24. Miscellaneous

842. This section of the report considers submissions that have not been covered in the general topics discussed so far.

843. Some submitters have made comments and sought decisions relating to particular proposals, rather than in relation to the Plan provisions. It is my view that these should be rejected, on the basis that the process for considering individual applications is at the time of resource consent application, whereas this process relates to the framework against which such applications are to be assessed.

844. Related to this, some submitters have sought that further evidence is provided on particular matters. In my view, the evidence on which this Plan is based is sufficient to determine the framework of the Plan itself. Future applications made under this Plan will however require further evidence to be provided at that time, in order to assess the particular proposal against the Plan's provisions. I therefore recommend that these submissions are rejected.

845. Some submitters have also sought a response on matters which sit outside the HWRRP, such as how non-regulatory approaches to water quality should be implemented, or in relation to who is to fund certain matters, or how charges should be levied. While it is my view that some of these may have merit, ultimately they do not require changes to be made to the HWRRP and as such I recommend that the submission points are rejected.

846. Related to this, some submitters have also sought changes to the HWRRP that relate to monitoring. While I agree that monitoring is required both under the RMA and appropriate in relation to the wider ZIP outcomes, in my view it is not necessary to specify monitoring in the HWRRP itself. This allows for monitoring programmes to be set in relation to what is considered necessary and appropriate at the time, and offers the flexibility of being able to adapt monitoring to respond to matters as they arise, rather than tying the council now, to a particular course of monitoring that in future may not be appropriate.

847. Mr Dirk De Lu (Submitter 23) seeks that this opportunity is used to restore both our rivers and our trust in democratic governance. I note that the management of the Waiau and Hurunui rivers proposed under the HWRRP is based around ensuring the life-supporting capacity of the river is retained (as directed in s5 of the RMA). Outside of this plan, the ZC is also responsible for restoration measures such as overseeing the Immediate Steps Biodiversity Funding.

848. Hurunui Waiau Zone Committee (Submitter 81) seeks that the words "*Ki uta, ki tai*" are included on the cover of the Plan, after the date and before the words 'Everything is Connected'. In my view this is appropriate and reflects Ngāi Tahu's association with these rivers and their role as kaitiakitanga.

849. Meridian Energy Ltd and Ngāi Tahu Property Ltd (Submitters 80 and 121) seek that references in the HWRRP to non-consumptive uses or activities are

rationalised. To address this, I recommend that references in the HWRRP to 'non-consumptive use' or 'uses' are amended to refer instead to 'activity' or 'activities', as this is consistent with Plan's definition. These changes are shown in **Appendix 2**.

850. Amuri Irrigation Company Ltd (Submitter 83) also seeks changes to the introductory paragraph to '*Part 3 – Rules'* to provide an example of other activities to which the HWRRP does not apply. In my view, the amendment is not helpful or necessary, as they are a number of activities governed by the NRRP and not provided for in the HWRRP, and highlighting one may lead to confusion.

851. Ms Linda Morris (Submitter 61) objects to the abstraction of water from the mainstem of the Hurunui River. It is my view that such a restriction would not result in the Plan's objectives being able to be achieved, nor would it be consistent with the purpose of the Act.

852. Ms Nixie Boddy (Submitter 57) seeks that no water abstraction occurs in the upper catchment. Rules 2.3(e), Rules 3.1(a) and 3.2(a) already require that restricted discretionary or discretionary activity takes must occur below certain points that may be considered as 'upper catchment' areas. However, takes above these are not prohibited but would default to a non-complying activity status under Rule 4.2. It is my view that this is appropriate, as any adverse effects on upper catchment values can be considered in a consent process, and assessed against the objectives and policies of the HWRRP.

853. Mr Graham Clark (Submitter 76) seeks that all runoff and leaching is stopped immediately. In my view, prohibiting all run-off and leaching will not meet the purpose of the RMA. However, the HWRRP contains planning provisions seeking to address the effects of land use on water quality, and avoid, remedy or mitigate the effects of runoff and leaching on water quality.

854. Several submitters have made comments, or sought a mechanism to be included in the HWRRP, either requiring, or providing clarity on when existing consents will be brought into line with the new provisions, such as the allocation regime and pro-rata reductions. I note that s128 (1)(b) of the RMA provides the Council with the ability to review the conditions of existing water permits when a regional plan is made operative, where they consider it appropriate to do so in order to enable the levels, flows, rates or standards set through rules in the regional plan to be met. Further, s68(7) of the RMA also allows rules to be included within the Plan that state whether existing resource consents which contravene any new levels, flows and rates are affected by the new rules and any period/staging within which existing consent holders are to comply with these rules. This is however not a mandatory requirement to state this. In my view, this should be left to the discretion of the Council, particularly given that such a review commits the Council to particular course of action with financial implications.

855. Mr John Talbot (Submitter 1) seeks that the footnotes are deleted from Table 1 and the note to the policies under Objective 2. In my view the footnotes should be retained as they are an important part of the table and provide clarity. While the note under Objective 2 does not have any statutory force, in my view it assists in making clear that the policies under this objective apply to both surface water and directly or highly connected groundwater, which is otherwise directed by the Plan and therefore assists in providing clarity.

856. This submitter also notes that in several tributary regimes, a "residual flow" is required, seeking that this term is clarified, because it is not defined and it is therefore uncertain what it means. It is my understanding that a residual flow is a flow which must be left in the river after abstraction, and differs from a minimum flow in that a residual flow applies immediately downstream of the point of take. If considered necessary a definition can be included in the Plan in order to clarify this.