**BEFORE THE ENVIRONMENT COURT**
**I MUA I TE KOOTI TAIAO O AOTEAROA**

**ENV-2018-CHC-000037**
**ENV-2018-CHC-000050**

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| **IN THE MATTER** | of the Resource Management Act 1991 |
| **AND** | of appeals under Clause 14 of the First Schedule of the Act |
| **BETWEEN** | **SOUTHLAND FISH AND GAME COUNCIL**<br>**Appellant** |
| **BETWEEN** | **ROYAL FOREST AND BIRD PROTECTION SOCIETY OF NEW ZEALAND INCORPORATED**<br>**Appellant** |
| **AND** | **SOUTHLAND REGIONAL COUNCIL**<br>**Respondent** |

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# STATEMENT OF EVIDENCE OF BEN FARRELL ON BEHALF OF THE SOUTHLAND FISH AND GAME COUNCIL AND THE ROYAL FOREST AND BIRD PROTECTION SOCIETY OF NEW ZEALAND INCORPORATED

**Dated: 17 February 2019**

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| COUNSEL for SOUTHLAND FISH AND GAME COUNCIL | SARAH ONGLEY<br>Barrister<br>PO Box 8213<br>New Plymouth Central<br>Phone: (06) 769 9400<br>Email: sarah@ongley.co.nz |
| COUNSEL for ROYAL FOREST AND BIRD PROTECTION SOCIETY OF NEW ZEALAND INC | SALLY GEPP<br>PO Box 266<br>Nelson<br>7040<br>Phone: 021 558 241<br>Email: s.gepp@forestandbird.org.nz |

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***ABBREVIATIONS***

| | |
|---|---|
| **Act/RMA** | Resource Management Act 1991 |
| **BPO** | Best Practical Option |
| **DoC** | Director-General of Conservation |
| **dSWLP** | Draft Regional Water and Land Plan for Southland 2015 |
| **Environment Southland** | Southland Regional Council |
| **FEMP** | Farm Environmental Management Plan |
| **Fish & Game** | Southland Fish and Game Council |
| **Forest & Bird** | Royal Forest and Bird Protection Society of New Zealand |
| **IPS** | Initial Planning Statement / Updated Evaluation Report: Proposed Southland Water and Land Plan, October 2018 |
| **National Directions** | National Policy Statements and National Environment Standards |
| **NOF** | National Objectives Framework (Procedures under Part CA2 of the NPSFM) |
| **NPSFM11** | National Policy Statement for Freshwater Management 2011 |
| **NPSFM14** | National Policy Statement for Freshwater Management 2014 |
| **NPSFM** | National Policy Statement for Freshwater Management 2017 |
| **NPSREG** | National Policy Statement for Renewable Electricity Generation 2011 |
| **NZCPS** | New Zealand Coastal Policy Statement 2010 |
| **RWP** | Operative Regional Water Plan for Southland 2010 |
| **pSWLP** | Proposed Southland Water and Land Plan 2016 |
| **PIP** | Environment Southland's Progressive Implementation Programme for Implementing the Policies of the National Policy Statement for Freshwater Management 2014 |
| **PRWLP** | Proposed Regional Water and Land Plan for Southland 2016 |
| **RELAP** | Operative Regional Effluent Land Application Plan for Southland |
| **Revised PIP** | The Revised Environment Southland's Progressive Implementation Programme for Implementing the Policies of the National Policy Statement for Freshwater Management 2014 |
| **RPS 1997** | Regional Policy Statement for Southland 1997 |
| **RPS** | Regional Policy Statement for Southland 2017 |

## 1. EXECUTIVE SUMMARY

1 My full name is Ben Farrell. I am an independent resource management planning expert. In 2014 and 2015 I was employed or engaged by Environment Southland as a Senior Policy Planner to, among other things, author various s.42A Reports in relation to submissions on the RPS and lead the development of the Draft Southland Water and Land Plan. During this time I worked closely with various Environment Southland governors, staff, and consultants about the pSWLP. Accordingly, I am familiar with the background to the pSWLP.

2 In this matter I have been engaged by Southland Fish & Game and Forest & Bird to provide planning evidence in relation to their appeals on the pSWLP (Topic A). Broadly, these parties are seeking urgent regulatory action so that the clear and present water quality degradation issues in Southland are halted and a trajectory of improvement commenced. Having reviewed their appeals and liaised with some of their representatives I understand they are particularly concerned that:

2.1 The objectives of the pSWLP take a step backward compared to the RWP which sought to improve water quality between 2010-2020 by 10%;

2.2 The pSWLP has no numerical water quality objectives or outcomes for diffuse discharges. Rather the pSWLP largely relies on the promotion of "Good Management Practices" and permits contaminants to enter water in a manner that will continue to degrade water quality; and

2.3 The procedures under Part CA2 of the NPSFM ('**NOF'**) is being used as justification for deferring a necessary regulatory response to the management of freshwater contamination.

3 The evidence about the quality of freshwater in Southland is clear. It is poor in many places and this trend is continuing, with the primary source of contaminants being primary production activities[1].

4 Both the NPSFM the NZCPS are applicable in respect of freshwater quality because the main catchments in Southland (excluding Conservation Land) flow into estuaries or lagoons (which are located in the coastal environment).

5 Integrated management (i.e. managing land based activities that affect freshwater and estuaries and lagoons) is a key directive in the NPSFM, NZCPS, RPS, and

[1] Ms McArthur EiC

pSWLP.

6 In order to safeguard the life-supporting capacity of freshwater and the health of people and communities in sustainably managing the use and development of land (the requirements of NPSFM Objective A1) Environment Southland should not, in my opinion, permit the discharges of contaminants from rural activities unless more measurable numerical outcomes apply and there is region-wide approach to controlling intensification and existing land uses which are contributing or would contribute to ongoing water quality degradation.

7 The pSWLP is intended to provide an interim regionwide regulatory management framework which, as directed by the RPS and NPSFM[2], maintains and improves the quality of all waterbodies having particular regard to nitrogen, phosphorus, sediment and microbiological contaminants, in the interim until the NOF is implemented. To achieve this:

7.1 Intensification of agricultural activities which contaminate waterbodies should cease until the NOF is implemented. The NOF process allows *specific* freshwater objectives to be developed at a finer scale, and the process can focus on the catchment loading of nutrients and targets for reducing or in places potentially increasing these loads and setting more refined "limits" and specific "targets".

7.2 Interim region-wide numerical outcomes based on minimum ecological health indicators (as discussed in the evidence of Prof Death) can be introduced into the planning framework to help identify which waterbodies are practically overallocated, and applied to avoid further degradation of water quality from diffuse contaminates

8 The suite of Objectives in the pSWLP are to be read together. No Objective overrides any other Objective. The Objectives are wound together by the concept of "*te uta ki tai*" and the concept of "*Te Mana o te Wai*" was placed at the top of the plan structure. This is evidenced in the pSLWP's preamble which has not been substantively amended since it was agreed by the Council after various Councillor workshops undertaken in 2014-2015.

9 Physiographic zones are a useful tool for determining appropriate mitigations in FEMPs or resource consent processes for intensive land uses. I consider the limitations with the physiographic zone framework (as outlined in Dr Snelders' evidence) can be distilled into one limitation - it requires ground truthing in order to

[2] As well as the NPSFM 2011 and NPSFM 2014 when they were operative.

be accurate at an individual property scale.

10 Having reviewed the Initial Planning Statement ("IPS"), the Commissioners' Recommendations, the appeals by Forest & Bird and Fish & Game, and the evidence of Mr McCallum-Clark, I consider:

10.1 In Objective 2 the relationship between primary production to other values should be made clear. I recommend the term primary production be deleted or the Objective reworded so that it is clear that the benefits of primary production clearly sit alongside other social, economic and cultural well-being matters.

10.2 It is appropriate that Objective 6 be amended to delete reference to the word "overall" because the higher order policy direction does not allow an "overs and unders" approach.

10.3 It is appropriate that Objective 6 and/or Objective 7 be amended to provide "numeric outcomes**"** to assist in the prevention of further deterioration of water quality, in the interim (until freshwater objectives and limits are set in accordance with the NOF).

10.4 It is appropriate that Objectives 9 and 9A be remerged and the Objective specifically include "recreational values" and "margins". Safeguarding recreation values is important to Southland and the Objective should include "margins" because Objective 9 relates to water quality and quantity broadly and Objective 17 (which also deals with margins) has a narrower focus (on "natural character").

10.5 It is appropriate that Objectives 13, 13A and 13B be re-merged as recommended by Mr McCallum-Clark. The matters in Objective 13(c) of the notified version should also be reinstated to address a policy gap.

10.6 It is appropriate that Objective 14 be amended to include reference to "dryland environments". Incorporating "dryland environments" will not result in unnecessary duplication of roles between the Regional Council and Territorial Authorities. Moreover, including dryland environments is appropriate to ensure that critical source areas are managed in the pSWLP.

10.7 It is appropriate that Objective 17 be amended to align with s.6(a) of the RMA.

10.8 It is appropriate that Objective 18 be amended to insert the word "environmental" (so the Objective promotes "Good <u>Environmental</u>

Management Practice"); and replace "maintain or improve" water quality with "maintain and improve water quality".

10.9 I consider it is appropriate for the physiographic zone maps to be included in the pSWLP and for the physiographic zone Policies (4-12) to be amended so that they:

a) Direct land uses which may contaminate water to avoid as far as practicable contaminants entering water by promoting the uptake of the Best Practical Option; and

b) Directing decision-makers to avoid contaminants entering water by "not" granting resource consent for activities which are known to pose a high risk to water quality within each respective physiographic zone.

10.10 It is appropriate that Policies 45 and 47 are amended so that the relevant FMU Section of this plan is not more lenient or less protective of water quality, quantity or aquatic ecology than the Region-wide Objectives and Region-wide Policies.

10.11 Policy 46 should be amended to provide for the Waituna Lagoon Catchment as a standalone FMU so that it can be prioritised, recognise the high significance of the waterbodies within the catchment, and build on the wealth of information and stakeholder engagement processes that have already been advanced.

11 I conclude the Objectives and Policies should be amended to provide more direct regulatory oversight across the Region to ensure water quality in Southland is maintained and improved, in the interim, until the localised NOF processes are completed.

## 2. INTRODUCTION

QUALIFICATIONS AND EXPERIENCE

12 My full name is Ben Farrell.

13 I am an Independent Planning Consultant based in Queenstown. I am owner and director of Cue Environmental Limited, a company I recently established to provide independent planning services across New Zealand.

14 Over the last 19 years I have been heavily involved in New Zealand's environmental and resource management sector. I studied planning, parks, recreation, tourism and resource management at Lincoln University from 1999 to 2003 graduating with a Bachelor of Resource Studies and a Master of Environmental Policy. During my studies I was employed by Auckland Regional Council, Greater Wellington Regional Council, and Connell Wagner Limited (in Christchurch). Since graduating, I have been employed as a planner by Upper Hutt City Council (2004), Boffa Miskell Limited (Wellington 2005-2010), Andrew Stewart Limited[3] (Wellington and Invercargill 2013-2015), Southland Regional Council (2014-2015), and John Edmonds and Associates (Queenstown 2015-2018). During 2010-2013 I was a self-employed planning consultant, working primarily for the New Zealand Wind Energy Association on a range of resource management policy and project developments across New Zealand.

15 Over the last 16 years I have provided strategic and statutory planning advice on a wide variety of resource management projects for a wide variety of clients or government employers, including the following to varying degrees:

15.1 The preparation of best practice development standards/guidelines in relation to resource management issues;

15.2 Preparation and implementation of National Policy Statements, seven regional policy statements, two unitary plans, and 19 district/regional plans; and

15.3 The preparation and assessment of numerous resource consent applications, notices of requirements, and Assessments of Effects on the Environment reports for a range of projects and applicants.

16 Since moving from Wellington to the South Island in 2014 I have worked primarily on regional planning issues in Otago and Southland, and Queenstown District planning issues. In 2014-2015, on behalf of Environment Southland, I prepared s42A reports for six chapters of the Proposed Southland Regional Policy Statement; and led the preparation of the Draft Regional Water Plan for Southland 2015.

17 In addition to my qualifications and experiences as a planner I am a full member of the New Zealand Planning Institute. I was on the Institute's Wellington regional branch committee from 2004-2013, I was chairman of that branch in 2010-2011, and I sat on the Central Otago Branch committee between 2015-2018. I currently

[3] Now 4Sight Limited.

sit on the editorial panel of the New Zealand Planning Institutes journal (Planning Quarterly). I also currently sit on the Central Otago and National committees of the Resource Management Law Association.

CODE OF CONDUCT

18 I have read the Environment Court's Code of Conduct for Expert Witnesses 2014, and I agree to comply with it. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed. I have specified where my opinion is based on limited or partial information and identified any assumptions I have made in forming my opinions.

19 My opinions rely in part on the Evidence in Chief presented by expert witnesses appearing for Environment Southland, Fish & Game, and Forest & Bird.

20 In preparing my evidence I have reviewed and may refer to the following relevant documents:

20.1 All documents listed in the Abbreviations above;

20.2 Evidence prepared in support of Environment Southland dated 14 December 2018 (McCallum-Clarke, Robertson, Snelder, Rodway, Lloyd, Hodson, Ward); and

20.3 Evidence prepared by Prof Death in support of Fish & Game and Ms McArthur in support of Forest & Bird.

21 Throughout my evidence, I have referred to other sources of information or material and I have referenced that material accordingly.

CONFLICT OF INTERESTS

22 I advise that I am married to Ms Ailsa Cain who is providing evidence on behalf of Nga Runanga, but I do not consider that any conflict of interest arises out of this.

23 I confirm I have no current or previous membership ties or interests to Fish & Game or Forest & Bird.

SCOPE OF EVIDENCE

24 My evidence is limited to the respective parts of the appeals by Fish and Game and Forest and Bird subject to Topic A. My evidence will deal with the following issues:

24.1 Background Issues including commentary on the relevant planning context including the relevant statutory documents, s.32, a discussion about the baseline date when water quality should be maintained or improved to, and a discussion on the community engagement and expectations.

24.2 Consideration of specific provisions relating to the appeals by Fish & Game and Forest & Bird.

24.3 Summary of amendments I recommend.

## 3. STATUTORY CONTEXT / RESPONSE TO THE IPS

25 I generally agree with the description of the relevant background discussion and statutory planning matters referred to in sections 2 and 3 of the IPS. The following discussion highlights matters arising from the IPS that I may disagree with or wish to reinforce.

STATE OF SOUTHLAND'S WATER QUALITY

26 As discussed in the evidence of Mr Hodson and Ms McArthur, drawing on the IPS and evidence of Council experts, there is no dispute that water quality has degraded throughout Southland (except for the National Parks where water quality typically remains in a natural state).

27 This is not a new issue to the Southland Region. From reviewing previous regional freshwater planning documents (for example the RWP and the RPS 1997) the Southland community has agreed that the water quality has degraded (in places) and that it should be improved. Section 3.1 of the IPS confirms that the pSWLP is the culmination of a long period of community engagement, with early engagement occurring in 2011. This statement is true insofar as it relates to the pSWLP document. However, under the Act the period of community engagement relating to the management of freshwater and Environment Southland's own policy direction to maintain water quality has been clearly signalled since 1997 when the first regional policy statement was notified and became operative. The RPS 1997 (through Objective 5.2) sought to maintain water quality as a minimum. The successive planning documents have consistently sought to achieve this outcome,

as a minimum (the RWP[4] through Objective 4) and the RPS 2017[5] (through Objective WQUAL.1(c)).

28 The water quality objectives and explanations in the RWP provide useful background about the state of water quality in Southland (prior to 2010) and community aspirations for maintaining and improving the quality of the water. These are listed in full in Appendix 1 to this evidence. Objective 2 and its explanation is particularly helpful on this point:

> *Objective 2 Maintain Water Quality*
>
> *To manage water quality so that there is no reduction in the quality of the water in any surface water body, beyond the zone of reasonable mixing for discharges, below that of the date this Plan became operative (January 2010).*
>
> *Explanation*
>
> *This objective adopts the philosophy of Section 69(3) of the Act. It reflects the fact that in many parts of Southland, particularly in lowland surface water bodies, water quality is poor and should not be allowed to deteriorate further. It also reflects the fact that there are areas of very high-quality water outside Natural State Waters, which should be protected from any overall deterioration in quality. While a one-off or temporary discharge with no long-term impacts on water quality may be acceptable into this high-quality water, a discharge that will result in long term or permanent deterioration in water quality would not be acceptable. One of the main purposes of this objective is to take into account the cumulative effects of discharges into water. (my emphasis)*

SECTION 32 CONSIDERATIONS

29 While not always expressed or referenced directly in my analysis below I have considered the relevant s.32 matters identified in the IPS as the starting point for my assessment.

30 For objectives, the test under section 32 is "*the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of this Act"* (my emphasis). The policies and methods are then to be measured against the objectives. A 'cost/benefit' analysis is not required for objectives. In this evidence I will refer to whether the objectives achieve the purpose of the Act, as also articulated in relevant national policy statements. I consider determining what is the "most appropriate" provision is not a precise science that can quantified. Where options are to be considered against each other a level of discretion is required, but the relevant statutory requirements (and national policy directions) must be the guide.

[4] Proposed in 2000, Operative 2010.
[5] Proposed 2010, Operative 2017.

PSWLP

***Purpose of the pSWLP***

31 Environment Southland's Revised Progressive Implementation Programme for Implementing the Policies of the National Policy Statement for Freshwater Management 2014 ("Revised PIP") confirms that the pSWLP is to provide an interim regulatory response to "*better manage land use intensification issues and prevent any further decline in water quality*"[6]. The pSWLP also provides the foundation for the catchment limit setting process under NOF (i.e. cementing the FMU boundaries, introducing Te Mana o Te Wai, incorporating the physiographic zone framework, and enhancing the recognition of the role and values of tangata whenua in the regional water planning framework), while giving effect to parts of the NPSFM and NZCPS.

32 The pSWLP combines and will replace two operative plans (the RWP and the RELAP). As identified in the IPS the pSWLP is intended to be an evolutionary change, not a radical departure from the current approach to resource management in Southland[7]. I understand the Objectives were not intended to achieve materially different outcomes compared to the WRP and RELAP. While not explicitly stated in the IPS, this is evident in the structure of the s32 Assessment which is framed around "significant"[8] and "medium"[9] level changes compared to the operative plans. I understand minor changes include restructuring the plan to make it more user-friendly (for example by restructuring the document to includes fewer sections; rewording the objectives and policies to make them clearer; and deleting non-essential text).

***Plan structure and integrated management***

33 The pSWLP recognises the importance of applying *ki uta ki tai* – being an integrated management approach. The Preamble to the pSWLP states:

> *The Southland Regional Council … seeks to manage water and land resources in a way that encompasses the Ngāi Tahu philosophy of "ki uta ki tai". This integrated approach recognises that water is important in a variety of ways, including for customary and recreation uses, mahinga kai, drinking water, agricultural production, irrigation, hydro-electricity generation, fisheries and tourism. This approach also recognises that the Southland Regional Council is committed to managing the connections between land and all water, particularly the effects*

[6] Revised PIP (fifth paragraph).
[7] Section 5.4.3 (Page 117).
[8] The introduction of new policies and/or rules in relation to cultivation, stock exclusion; diffuse nutrient discharges/farming; and Ngai Tahu values
[9] Amendments to existing policies and/or rules relating to: effluent disposal, wetlands, pest management, subsurface drains, dust suppressants, general discharges, and water take.

*of water quality and quantity changes on the health and function of estuaries and coastal lagoons.*

34 The suite of Objectives in the pSWALP are to be read together. No Objective overrides any other Objective. The Objectives are wound together by the concept of "*ki uta ki tai*" and the concept of "*te mana o te wai*" is placed at the top of the plan structure. This is evidenced in the preamble which has not been substantively amended since it was agreed by the Council after various Councillor workshops undertaken in 2014-2015.

REGIONAL POLICY STATEMENT

35 The RPS sets clear directives and methods for the Regional Council to manage freshwater water quality via regional plans. I interpret the RPS directives as requiring the pSWLP to (among other things) include provisions to:

35.1 Safeguard the life-supporting capacity of water and related ecosystems[10];

35.2 Safeguard the health of people and communities[11];

35.3 Meet the reasonably foreseeable social, economic and cultural needs of future generations[12];

35.4 Safeguard identified environmental and cultural values and resources of tangata whenua from inappropriate use or development[13];

35.5 Manage activities that affect water quality in a natural state so that water quality remains in a natural state[14];

35.6 Manage activities that affect water quality to improve water quality in accordance with specific freshwater objectives and limits formulated out of the NOF[15], and in the interim, "halt the decline" of water quality in lowland water bodies[16] and maintain or improve water quality of all waterbodies having particular regard to nitrogen, phosphorus, sediment, and microbiological contaminants[17];

36 In my opinion W.QUAL.2 is of particular relevance to the management of water quality because it sets a clear direction to maintain water quality, having particular

[10] Objective WQUAL.1(a).
[11] Objective WQUAL.1(b).
[12] Objective WQUAL.1(d).
[13] Method TW.1.
[14] Policy WQUAL.6.
[15] Policy WQUAL.1 and WQUAL.5
[16] First part of Objective WQUAL.2.
[17] Policy WQAUL.2.

regard to nitrogen, phosphorus, sediment, and microbiological contaminants; it does not allow water quality of any FMU to become further degraded and activities resulting in diffuse discharges should be managed accordingly. This is supported by the following statement on page 30 of the RPS which explains:

> *Where possible, an effects-based approach is the preferred approach to managing water quality. However, where it is known that land use activities are causing non-point source discharges that are affecting water quality and which need to be managed, it is appropriate to focus on managing the activities themselves…*

37 I observe that the IPS (page 16) says:

> *… in some respects, the RPS is not fully up-to-date with respect to the NPSFM (further discussed below). In the case of a gap in the RPS or any conflict between the RPS and any current NPS, the NPS, as the superior document, provides the policy direction for the pSWLP to give effect to.*

38 I do not agree there are any fundamental conflicts arising in the provisions of the RPS and the NPSFM. I could not find any "further discussion" in the IPS about the RPS not being up-to-date with respect to the NPSFM. The matters introduced by the NPSFM (Te Mana o te Wai, monitoring macroinvertebrates, managing nitrogen and phosphorus, considering economic well-being, improving water quality for human health) were considered in the preparation of the RPS.

NEW ZEALAND COASTAL POLICY STATEMENT

39 The pSWLP is intended to (and required to) give effect to the NZCPS. The NZCPS applies to the coastal environment, which in Southland includes coastal sections of rivers, streams and significant estuaries and lagoons. This is confirmed in the evidence of Ms Robertson, who also confirms the FMUs for Southland include the coastal environment but not the coastal marine area.

40 The main catchments in Southland (excluding Conservation Land) flow into estuaries or lagoons. The catchments for the Waiau Lagoon, Jacobs River Estuary, New River Estuary and Toetoes (Fortrose) Estuary represent the majority of the land area in Southland[18]. As freshwater contaminants flow into these estuaries and lagoons, both the NPSFM the NZCPS are applicable in respect of freshwater quality. Under these National Policy Statements Councils must consider the effects of freshwater quality on the coastal environment (including the quality of water within estuaries and lagoons), and the bearing this should have on managing land use which affects the quality of freshwater. Put simply parts of the NZCPS are

[18] Ward EiC [41].

relevant because land-based activities outside the coastal environment have a flow on effect on the quality of the water and habitats within the coastal environment.

41 Objective 1 of the NZCPS seeks to:

> *"Safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries dune and land, by … maintaining coastal water quality, and enhancing it where it has deteriorated from what would otherwise be its natural condition, with significant adverse effects on ecology and habitat, because of discharges associated with human activity".*

42 Policy 21 reinforces the direction of Objective 1 through prioritising the need to improve deteriorated coastal water quality where it is having a significant adverse effect on ecosystems, natural habitats, or water based recreational activities or where it is restricting existing uses including aquaculture, shellfish gathering and cultural activities. Sedimentation is a matter specifically addressed in Policy 22 which requires the impacts of sedimentation levels on the coastal environment to be monitored and ensure that there are no significant increases in sedimentation in the CMA as a result of activities. Policy 23 also addresses the discharge of contaminants and the need to manage the adverse effects. Policy 23 outlines that when managing discharges to water in the coastal environment, particular regard needs to be had to several matters, including the sensitivity of the receiving environment and the capacity of the receiving environment to assimilate contaminants.

43 The NZCPS also contains provisions dealing with biodiversity, and requires avoidance of adverse effects on certain habitats, and avoidance, remediation or mitigation of adverse effects on other habitats. This is particularly relevant to the management of wetlands and lakes in the coastal environment which can provide habitat for threatened and at risk species and management of spawning habitat. Policy 11 of the NZCPS is also relevant to managing water quality that may affect coastal ecosystems in the coastal marine area (CMA).

44 Assuming that the quality of water in lagoons and estuaries has deteriorated to the point where it is having a significant adverse effect on ecosystems and natural habitats and water-based recreation and is restricting existing uses (for example based on the evidence of Ms McArthur[19]), then the pSWLP is required to give effect to Policy 21, which promotes the development of rules in plans to address improving water quality of estuaries and lagoons as a priority.

[19] McArthur EiC [39].

45 Objective A2(c) of the NZCPS and Policy 21 of the NZCPS are closely linked (they both require improvement in water quality when certain thresholds have been met).

46 Given the importance and sensitivity of coastal ecosystems, and the poor state of water quality (particularly relating to sedimentation) affecting the coastal environment, in my opinion a plan which does not actively seek to improve water quality and habitat quality in the coastal environment will not give effect to the NZCPS.

NATIONAL POLICY STATEMENT FOR FRESHWATER MANAGEMENT

47 The PIP confirms that policies A1, A2, A3, B1, B2, B5, B6, CA1, CA2, CA3 and CA4 will be implemented at a later date[20]. It follows that the pSWLP has been prepared with the intention of giving effect to the residual provisions, being:

47.1 **Objective AA1** and supporting **Policy AA1** in relation to te mana o te wai;

47.2 **Objectives A1, A2, A3, A4 and supporting policies A4, A5, A6, and A7** in relation to Water Quality;

47.3 **Objectives B1, B2, B3, B4, B5 and supporting policies B3, B4, B7, and B8** in relation to Water Quantity;

47.4 **Objective C1 and supporting policies C1 and C2** in relation to Integrated Management;

47.5 **Objective CA1** in relation to the National Objectives Framework;

47.6 **Objective CB1 and supporting policies CB1, CB2, CB3, CB4** in relation to Monitoring Plans;

47.7 **Objective CC1 and supporting policies CC1 and CC2** in relation to Accounting for Freshwater Takes and Contaminants; and

47.8 **Objective D1 and policy D1** in relation to Tangata Whenua Roles and Interests.

48 In my opinion Policy A3(b) is also relevant and should be implemented in the

[20] It is not entirely clear from reviewing the IPS and evidence of Mr McCallum-Clark which provisions in the NPSFM the pSWLP is intended to give effect to and not give effect to. For example the IPS [p11] states: "*Council has recently issued an updated Progressive Implementation Programme, identifying its process to give effect to this NPS.* ***In the interim, the pSWLP gives effect to the NPSFM to the extent that it is required to do so. This means that the pSWLP gives effect to the Objectives, and some of the policies****. The Progressive Implementation Programme identifies the timing and outlines the process to establish values, freshwater objectives, targets and limits, and identify and address any overallocation*".

pSWLP. It provides a separate and different directive compared to Policy A3(a). Although Council has indicated Policy A3(b) is to be implemented at a later date, Policy A3(b) does not rely on the NOF procedures being completed and, in my view, should be given effect to now. It directs that regional councils:

> *A3(b) where permissible, making rules requiring the adoption of the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of any discharge of a contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.*

49 Despite the overwhelming evidence that the state of water quality in Southland is degraded (and in various places significantly degraded and toxic to the point of being unsafe for people to gather food or participate in contact recreation)[21], Environment Southland considers that none of the FMUs in Southland are currently "over-allocated" in respect of freshwater quality.

> *The pSWLP does not generally seek to make improvements to water quality, other than through adoption of good management practices, nor does it seek to address overallocation. Council considers that, in advance of setting freshwater objectives, no waterbody in Southland is overallocated, in terms of the NPS-FM definition of overallocation, with the possible exception of the Cromel Stream[22]. (my emphasis)*
>
> *"As the Council is yet to undertake the process set out in Policy CA2 of the NPSFM (known in Southland as 'limit setting'), these Objectives are not "freshwater objectives" as defined in the NPSFM". The NPSFM defines "overallocation" as "the situation where the resource: a) has been allocated to users beyond a limit; or b) is being used to a point where a freshwater objective is no longer being met". The pSWLP avoids the provision freshwater objectives (as defined in the NPSFM) and allocation to users within any limits[23].*

50 Mr McCallum-Clark then states[24] that, for practical purposes, some waterbodies in Southland are overallocated, and I agree with his statement:

> *For practical purposes, it would appear that some waterbodies in Southland are degraded, when this term is used colloquially. By this, I mean that some could be below national bottom lines in terms of the NPS-FM, or below commonly acceptable water quality…*

51 In any case, regardless of views on 'over-allocation', there is clear policy direction (in the applying parts of the NPSFM and the RPS) for Environment Southland to

[21] For an example refer to Environment Southlands media releases or discussion about toxic algae: https://www.es.govt.nz/services/environmental-monitoring/recreational-water-quality/Pages/default.aspx#toxic-algae.
[22] Page 24 of the IPS.
[23] Section 5.3 of the IPS.
[24] EiC at [69].

maintain and improve the quality of water in the interim, that is, prior to the NOF.

52 The pSWLP requires a framework now that gives effect to the NPSFM provisions that have not been deferred for later implementation. In my opinion the pSWLP does not currently do so. It does not have an adequate mechanism to safeguard life-supporting capacity or to maintain water quality (and improve it where it is degraded).

53 The fact that Environment Southland is not intending to give full effect to the NPSFM in the pSWLP does not mean that it should not be providing specific numeric water quality outcomes for maintaining or improving water quality in the interim. The NOF process will provide an opportunity for interim measures to be reviewed and targeted at finer bespoke scales allowing integrated management.

54 In respect of Objective A3 and Policy A6(b) I observe from the Revised PIP that ES was committed to developing and publicly notifying regional (swimmability) targets prior to 31 December 2018. However, I understand these are yet to be publicly notified.

RMA PART 2

55 In my opinion the matters in Part 2 of the RMA are relevant and ultimately overriding in case of any policy conflict. Notwithstanding this, the majority, and potentially all, applicable Part 2 matters have been 'particularised' in the relevant superior planning documents (being the WCOs, National Directions, and the RPS).

## 4. CONSIDERATION OF SPECIFIC PROVISIONS

OBJECTIVE 2

56 Objective 2 refers to water and land as specifically enabling primary production but does not single out any other specific human use of water and land. In my opinion Objective 2 unfairly favours primary production and does not emphasise the sustainable management of natural and physical resources.

57 There is no comprehensive explanation in the Commissioners Report or the s42A Report why the Objective was modified from the notified version of the plan to specifically refer to "primary production". The s42A Report recommends the Objective be retained as notified.

58 Upon consideration of the appeals to delete the reference to "primary production" Mr McCallum-Clark states:

> *The NPS-FM now includes provisions to enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quality, within limits (Objective A3 and Policy A7). I note that primary production does contribute disproportionally to the Southland economy compared to the rest of the country and plays a significant role in the social, economic and cultural well-being of the region. It is my understanding that the Hearing Panel were cognisant of this and sought recognition of this factual situation in Objective 2. I am also of the view that the addition of these words does not materially alter the likely outcomes, in terms of land and water management and the control of diffuse discharges, as there are other, more specific and directive objectives and policies on these matters.*

59 The IPS stated:

> *Overall, this objective is considered well aligned with the community's views as water and land are highly valued resources within the Southland Region. The submissions on the pSWLP largely supported this objective. However, a significant number sought greater recognition of the economic implications, hence the specific recognition of 'primary production'. Conversely some submitters sought greater recognition of environmental constraints.*

60 Mr McCallum-Clark opines that the addition of the words does not materially alter the likely outcomes. I disagree. For the reference to "primary production" not to have any material affect then its reference would be an inclusive reference, for example:

> *Water and land is recognised as an enabler of economic, social and cultural wellbeing of the region (including primary production).*

61 Singling out "primary production" implies that water and land is more important for enabling primary production over the general reference to the "economic, social and cultural wellbeing of the region".

62 While there is specific direction for providing for productive economic opportunities in the NPSFM, the other matters in s5 (economic, social and cultural wellbeing) are equally applicable. However, no analysis (that I am aware of) has been undertaken to identify what "other specific well-beings" in Southland might be considered alongside primary production. In the absence of such information, the pSWLP risks ignoring these important attributes of the Southland economy and inappropriately influencing the value setting exercise yet to come through the FMU process towards favouring primary production-related values of freshwater.

63 The first paragraph in the Water Quality Issues statement outlines the following:

> *Water is a fundamental resource. The Southland economy is*

> *based on rural production and servicing, fisheries, tourism, energy production and industrial processing, all of which rely on the availability of good quality water. Water quality is a key factor in the ecological health of waterbodies, influencing which species are present. The mauri of a waterbody is affected by water quality. Many people recreate in or near Southland's waterbodies, including swimming, white baiting, duck hunting, fishing, walking or tramping and boating activities.*

64 Placing "primary production" before any of these other matters, in my opinion, implies that primary production, literally, comes first in Southland. The Objective now, in my opinion, deliberately focuses on water and land being an enabler for primary production ahead of economic, social and cultural wellbeing of the region.

65 Because Objective 2 is to be read and applied alongside the entire suite of Objectives there is a risk that a bias, in favour of primary production, will occur when: considering which policies and methods are the most appropriate when giving effect to the suite of objectives; and considering competing objectives and policies on specific resource consent applications. The IPS confirms in the "feasibility" analysis that:

> *The objective will guide decision making, particularly on resource consents, and will also guide the decision making of others, including territorial authorities with respect to land use changes, applicants and other managers of land and water resources*

66 I acknowledge that primary production provides a significant contribution to the Southland economy. However, primary production is the primary contributor of contaminants to Southland's freshwater quality and, in my opinion, the lack of clarity means managing the effects of primary production could be undermined in favour of enabling it.

67 Moreover, NPSFM Objectives A4 and B5 state:

> *[A4] To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quality, within limits (my emphasis).*
>
> *[A5] To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing fresh water quantity, within limits (my emphasis).*

68 There is no requirement to specifically refer to "primary production". Rather the national direction is to ensure that the productive economic opportunities are provided for *within limits*. The Commissioners Recommendations and analysis by Mr McCallum-Clark does not consider this qualifier.

69 In my opinion Objective 2 will be more appropriate if it is amended to delete the reference to primary production (because it is not necessary or appropriate to afford more weight to primary production over other matters) or replace it with the specific wording used in the NPSFM.

***Recommendation***

70 I recommend amended Objective 2 as follows:

> *Water and land is recognised as an enabler of ~~primary production and~~ economic, social and cultural wellbeing of the region (including productive economic opportunities) within limits.*

OBJECTIVE 6

71 Fish & Game and Forest & Bird supported the notified version of Objective 6 with amendments to strengthen it, including reference to 10% improvement objective set out in Objective 4 of the RWP.

72 The IPS states (under the heading "Relevance"):

> *This objective relates to a primary function under the RMA, in terms of protection of ecosystems. This protection of ecosystems includes all animal and plant life, including humans. It is particularly relevant to sections 5, 6(c), and 7(d) of the RMA. Furthermore, this objective achieves the purpose set out in Policy 21 of the NZCPS which requires that the where coastal water quality has deteriorated, priority shall be given to the improving water quality. The Objective also achieves the Council's obligations as set out in Objective A2 of the NPSFM, and is in accordance with the direction set out in Objectives WQUAL.1 and WQUAL.2 of the pRPS. While the objectives and policies of Chapter 4 of the RPS do not refer to "overall water quality", this is the wording used in the NPSFM, which is considered to be the superior document, and "overall" water quality is likely to be more achievable…*

73 The IPS states (under the heading "Feasibility"):

> *The Objective will be a useful guide to decision making, but also in setting the parameters for flow regimes and water quality states, and the scientific investigation required. This Objective will also be given effect to through the FMU limit setting process. The Objective is strongly reliant on the Council's functions under section 30, particularly with respect to the management of water. The Objective will also influence the activities of others, and expectations with respect to surface water bodies in terms of quality and quantity limits.*

74 In his analysis Mr McCallum-Clark[25] stated:

[25] McCallum-Clark EiC [48-54]

> *The Hearing Panel considered the absolute nature of the 'no decline in water quality' aspect of Objective 6 to be unachievable, particularly in relation to areas immediately downstream of point-source discharges. The Hearing Panel considered that inclusion of the word "overall" in Objective 6 gives better effect to the NPS-FM Objective A2, and that although the RPS does not refer to the "overall water quality", the NPS-FM is the higher order document.*
>
> *In my opinion, retaining the word 'overall' could be considered to make the Objective more consistent with Objective A2 of the NPS-FM, as the wording becomes more similar. It is also clear that the NPS-FM is the superior document, so if there is any inconsistency with the RPS, it must be resolved in favour of the NPS-FM. That said, if the RPS is more stringent than the NPS-FM, I do not consider that it is necessarily inconsistent or no longer gives effect to the NPS-FM.*
>
> *However, in my opinion, there remains a risk that the impression created by introducing this word may be that the fundamental position of no further decline in water quality, expressed in the RPS and set out as a high-level direction from the Council during the drafting process, is somehow less firmly held. I agree that there are specific circumstances where the pSWLP provides for a resource consent application to be made that may lead to some level of water quality decline, particularly when compliance with the Appendix E water quality standards for point source discharges lead to a reduction in water quality. I anticipate that there would need to be reliance on the stronger direction of RPS provisions and other policies in the pSWLP to ensure that the wording was not considered to be a softening of the simple and clear message of no further decline in water quality.*
>
> *(my emphasis)*

75 I agree with the underlined text above. The direction in the RPS deliberately avoids using the term 'overall' on the basis that it risks taking an 'overs and unders' approach which is contrary to the community aspirations of "*preventing further degradation of freshwater quality"* by: (i) maintaining water quality where it is not degraded; and (ii) improving water quality where it is degraded.

76 I acknowledge the NPSFM requires the NOF to be applied. However, this does not provide a means for derogating from the applying parts of the NPSFM and Environment Southland's clear objective of maintaining water quality (where it has not been degraded) and improving water quality (where it has been degraded). If Environment Southland's intentions of "halting the decline"[26] or "*preventing further degradation of freshwater quality in Southland while limits are developed*"[27] are to be articulated in the Objectives then the plan framework should be clear that no further degradation of water quality is anticipated, at least until the FMU catchment

[26] RPS Objective WQUAL.2

[27] The Revised PIP confirms: "*The pSWLP was notified in June 2016 and was developed to prevent further degradation of freshwater quality in Southland while limits are developed through the People, Water and Land Programme" (my emphasis)*

limit setting process has been implemented. In my opinion it is entirely appropriate that the Objectives in this pSWLP, should not introduce the word "overall".

77 The RPS provides regionwide objectives and directives to ensure the regional water plan provisions achieve the outcomes summarised in paragraph 35 above.

78 While the statutory direction has been to maintain water quality since 1997, I understand the first reliable source of baseline data (for which water quality can be measured at a region wide scale) is provided in the Southland State of Environment Report 2010. Accordingly, it is problematic to require maintenance of water quality levels to 1997 levels when there is a lack of reliable information about the state of water quality in 1997. However, at a regionwide scale, I understand it is practical to ('draw a line') based on the water quality information provided in the 2010 State of Environment Report. I observe that drawing a line at 2010 would coincide with the operative date of the RWP, which has a clear directive in Objectives 2-4 to maintain water quality and improve water quality where it has been degraded. Objective 2 explicitly states:

> *To manage water quality so that there is no reduction in the quality of the water in any surface water body, beyond the zone of reasonable mixing for discharges, below that of the date this Plan became operative (January 2010).*

79 I acknowledge that drawing the line at 2010 will not capture water quality thresholds that degraded between 1997 and 2010, for example as a result of non-point source discharges arising from the significant increase in land use intensification from sheep and beef to dairy.

80 Relying on the evidence of Ms McArthur and Prof Death about the state of water quality in Southland and sources of contamination, coupled with the policy history and backdrop of the community's historic and repetitive aspirations to improve water quality, I also consider it is appropriate for the pSWLP to have an Objective providing numeric outcomes for nitrogen, phosphorus, sediment, and direct ecosystem measures (MCI, QMCI). This would provide an effective way of ensuring that all decisions that affect water quality are working towards the common outcome of maintaining and enhancing water quality. Case by case decisions that are unconnected to this outcome have failed, and will continue to fail, in addressing the cumulative effects of multiple activities on water quality. In my opinion the need to address cumulative water quality impacts is one of the reasons the NPSFM directs setting freshwater objectives, limits to achieve those objectives and managing activities within limits. Neglecting to include numeric goals for diffuse discharges will likely undermine the effectiveness of the operative and proposed planning

framework, in the interim. In the Southland Region, there is some urgency around the need to provide an effective framework for management of diffuse discharges. Neglecting to include numeric goals will not fulfil Environment Southlands obligation's to give effect to Objectives A1 and A2 of the NPSFM, the NZCPS, the RPS (in regard to safeguarding life supporting capacity and ecosystems, maintaining and improving water quality).

81 Finally, although the word "overall" is included in the NPSFM 2011 and NPSFM 2014, the RPS directs (specifically through Policy WQUAL.2) that water quality is to be maintained or improved in all waterbodies in the Southland Region. As stated (above) I do not consider the more recent notification of the NPSFM creates a policy conflict and the RPS should be given effect to.

***Recommendation***

82 I recommend amending Objective 6 as follows:

> *Objective 6*
>
> *There is no reduction in the ~~overall~~ quality of freshwater, and water in estuaries and coastal lagoons, by:*
>
> *(a) maintaining the quality of water in waterbodies, estuaries and coastal lagoons, where the water quality is not degraded; and*
>
> *(b) improving the quality of water in waterbodies, estuaries and coastal lagoons, that have been degraded by human activities.*

83 Subject to any amendments to Objective 7, as discussed below, I also recommend consideration be given to amending Objective 6 to provide a reference to region wide numeric outcomes as a bottom line for ecosystem health.

OBJECTIVE 7

84 Objective 7 seeks to avoid further over-allocation of freshwater (water quality and quantity) and phase out existing over-allocation in accordance with freshwater objectives, freshwater quality limits and timeframes established under the NOF.

85 Fish & Game seek the following amendments to Objective 7 in order to help improve water quality that has been degraded by ensuring decision-makers on resource consent applications for activities which may further degrade water quality have a clear ability to do so:

> *Any further over-allocation of freshwater (water quality and quantity) is avoided and any existing over-allocation is phased out in in accordance with freshwater objectives, freshwater quality limits and timeframes established under Freshwater Management Unit processes, or earlier when considering relevant consent applications.*

86 As discussed above Mr McCallum-Clark opines that "practically" water quality is overallocated. Coupled with the trajectory sought by the operative regional planning instruments and the evidence of Prof Death and Ms McArthur, I consider there is no doubt that water quality is overallocated throughout lowland, and some other, waterbody classes.

87 In respect of the outcome being sought by Fish & Game (the ability for decision makers on resource consents to be able to refuse activities), Mr McCallum-Clark states:

> *In my opinion, other objectives and policies of the pSWLP, such as Objectives 3 and 6, and Policies 15B, 17A, 40 and 42, provide sufficient direction in the interim period such that any resource consent is likely to be granted to maintain, if not improve, the existing situation and is likely to be for a comparably short duration, so that the forthcoming FMU processes are not compromised.*

88 As identified in the IPS[28] Objective 7 achieves Environment Southland's primary function under the RMA in terms of protection of water quality and sustainable management *("this protection of ecosystems includes all animal and plant life, including humans. It is particularly relevant to sections 5, 6(c), and 7(d) of the RMA*").

89 In my opinion it is appropriate that the opportunity is taken to direct that existing water over-allocations are phased out when considering applications to take / use water or contaminate waterbodies. Delaying the phasing out of existing over allocation in relation to water quality and quantity in accordance with unspecified timeframes established under the FMU processes, will not maintain and improve water quality in the interim period. Delaying the phasing out of existing overallocation would appear to be inconsistent with the statutory directions to improve water quality that is degraded, let alone any legislative requirements to maintain existing water quality (in accordance with ss30(1)(c)(ii) and 30(1)(f) requires) and the NPSFM Objectives.

90 I do not agree with Mr McCallum-Clark that Objectives 3 and 6 coupled with Policies 15B, 17A, 40 and 42 (as they are currently drafted) provide sufficient direction in the meantime:

90.1 Objective 3 relates to the mauri of waterbodies and, although important, has no measurable or transparent parameters. It provides limited information to decision-makers in the face of case by case applications for resource

[28] Page 104, s.5.3.7 (under the heading "Relevance").

consent.

90.2 Policy 15B links to the water quality standards in Appendices and directs that applications for resource consent could be declined if activities will exceed those standards or guidelines after the zone of reasonable mixing. This Policy is, at best, ambiguous in its application to cumulative effects associated with diffuse contamination, including contamination from nitrogen, phosphorus, sediment, microbiological contaminates. Mr McCallum-Clark does not elaborate on how he sees the Appendix E standards providing assistance in relation to diffuse discharges. His comment[29] that "degraded" could be adjudged on a comparison with NPSFM bottom lines, or "*below commonly acceptable water quality*", suggests he does not consider Appendix E to have a role for managing diffuse discharges.

90.3 Policy 17A has limited application. It requires management of Community sewerage schemes and on-site wastewater systems and allows contaminates to enter waterbodies, irrespective of the state of the waterbody.

90.4 Policy 40 relates to the duration of consents. It therefore can limit the duration of consents but cannot prevent consents from being granted (or further contamination of waterbodies occurring). Although [at clause 7] it refers to the possibility of duration being linked to the timing of development of FMU sections of the pSWLP, it provides relatively little direction, stating consideration will be given to *"whether granting a shorter or longer duration will better enable implementation of the revised frameworks established in those sections*". (my emphasis). The frameworks are currently unknown.

90.5 Policy 42 relates to water permits to take and use water and is therefore not directly relevant to water quality issues.

91 Accepting that water quality is, in places, practically overallocated, I consider it is appropriate to amend Objective 7 so that it captures the "practical overallocation" in the interim until bespoke freshwater objectives and limits are set in accordance with the NOF. Prof Death identifies and recommends numerical freshwater outcomes which could provide appropriate parameters or thresholds upon which the 'practical overallocation' (referred to by Mr McCallum-Clarke) is measured.

92 I consider that this would be the most appropriate way to achieve the purpose of the Act, and to implement the objectives of the NPSFM that are to be implemented in pSWLP, including Objective A1. Prof Death's numerical outcomes inform the

[29] McCallum-Clark EIC at [69].

meaning of "life supporting capacity" (which Prof Death considers has the same meaning as "ecosystem health") prior to FMU processes occurring. Prof Death considers that the essential parameters for measuring and managing ecosystem health, include MCI, QMCI, nitrogen, phosphorus and sediment. Although Mr McCallum-Clark refers to the bottom-lines in the NPSFM, Prof Death's evidence is that those are insufficient, on their own, for measuring or managing ecosystem health. Prof Death also considers that there is sufficient scientific information to set numeric outcomes, for "ecosystem health" parameters, now, at spatial scales that apply to waterbody classes. Prof Death's numerics differ from those in Appendix E. This is perhaps not surprising since Appendix E pSWLP was 'rolled over' from the RWP, which was notified in 2000 and made operative in 2010.

93 Although there may be other expert opinion on what current outcomes for ecosystem health should be, amongst freshwater scientists, I consider they should be set in the pSWLP, at least in the circumstances of the Southland Region. I am not tied to the use of the word "over-allocation" in Objective 7, as I am aware that some parties consider this term can only be used strictly according to the definition in the NPSFM. However to be effective both the intent, and the underpinning for, the Objective should be clear. That is, providing a benchmark for what is to be avoided/phased out, so that the matter is not the subject of argument on a case by case basis. Prof Death's evidence[30] is that the (numerical) outcomes represent "*the level at which further use of a freshwater body would likely cause it to fail to achieve ecosystem health"*. As stated by Prof Death, some persons describe this state as exceeding the "assimilative capacity" of a waterbody, so this term could be used. However I do not consider it is inherently problematic to use the term "over allocation" prior to FMU processes occurring.

94 In relation to possible improvements in the scientific understanding of "over-allocation" this relates to the "*risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions"*. The application of that test plays out when considering the policies and rules themselves, and how numerical outcomes in the pSWLP (for ecosystem health parameters) would apply through the policies and rules. However, I agree with Ms McArthur's evidence that the state of the environment in Southland, with respect to water quality, would indicate that the "risk" should not fall on the environment.

***Recommendation***

95 I consider the following amendment to Objective 7 coupled with supporting

[30] Death EIC at [4.3].

numerical outcomes to help define "practical overallocation", or similar amendments with similar effects, would be more appropriate than the Decisions version and the suggested amendment being sought by Fish & Game.

96 I recommend amending Objective 7 as follows:

> *Any further over-allocation of freshwater (water quality and quantity) is avoided and any existing over-allocation is phased out in accordance with freshwater objectives, freshwater quality limits and timeframes established under Freshwater Management Unit processes, or earlier where the resource is being used to a point where a region-wide freshwater numeric outcome(s) are no longer being met.*

OBJECTIVES 9, 9A

***Structure***

97 I agree with Mr McCallum-Clark that re-merging Objectives 9 and 9A and re-instating the intended prioritisation of the matters in 9A being subordinate to those matters in 9 would remove any doubt and make the pSWLP clearer and easier to interpret. Currently, there is a lack of clarity of the relationship between the two objectives and I agree with [the reasons in the appeal by] Forest & Bird that:

> *The NPSFM prioritises safeguarding environmental values and people and communities' health. Objectives 9A and 9B have the potential to conflict with the achievement of freshwater objectives. The objective should be to sustainably manage these activities within environmental limits.*

***Inclusion of 'recreation values'***

98 As notified, Objective 9 included recognition that water should be managed for recreational values (and historic values among other things). These values were deleted by the Hearing Panel.

99 In my opinion recreational values of surface waterways can depend significantly upon water quantity, especially the recreational values of rivers which can be highly dependent upon flow. I agree with Mr McCallum-Clark[31] that this Objective does not need to relate to s.6 matters only and deletion of recreational values from Objective 9 has left a gap in the suite of Objectives, for the following reasons:

99.1 Recreation uses are identified in the Plan as being important (for example, the Preamble states "*This integrated approach recognises that water is important in a variety of ways, including for customary and recreation uses, mahinga kai, drinking water, agricultural production, irrigation, hydro-*

[31] McCallum-Clark EiC at [84]

*electricity generation, fisheries and tourism*" (my emphasis);

99.2 The surface water Issues statement says: "*Out-of-stream uses, such as the abstraction, damming and diversion of surface water, can reduce water quantity and alter flow regimes in waterbodies, which can have a number of adverse effects on instream values, including reducing water quality and aquatic habitat, diminishing natural character, amenity, aesthetic and landscape values and impacting on recreational and cultural values and fisheries and harvesting*" (my emphasis); and

99.3 "*The resulting flow regime is highly modified, particularly below the Manapōuri Lake Control Structure (Mararoa weir), whilst supporting a range of biological, recreational, landscape, amenity and other community values*. (my emphasis)"

99.4 The Issues statement for river and lake beds states: "*River beds (including beds of streams and modified watercourses) and lake beds have a wide variety of values, including natural, ecological, cultural and spiritual values, with rivers and lakes used for a range of recreational and cultural activities, including walking, fishing, game bird hunting, boating, and food gathering;* (my emphasis)"; and

99.5 Policies 20, 24, 29 all require consideration of recreation matters.

100 NPSFM Objective A3 provides a clear objective requiring immediate action to ensure freshwater is suitable for primary contact more often. I agree with Mr McCallum-Clark that safeguarding recreation values accords with NPSFM Objective A3.

101 The RPS recognises the importance of recreation in relation to waterbodies:

> *To resource users such as industry, the agricultural sector and local communities, water sustains their social, economic and cultural wellbeing. To the whole regional community, water represents a significant recreational and natural asset that has intrinsic values just through its existence (my emphasis)*[32]*.*
>
> *Issue WQUAN.1*
>
> *Taking, use, damming and diversion of water contributes to the social, economic and cultural wellbeing of Southland people and communities, but can cause changes in flows and levels of water that can significantly affect aquatic and riverine ecosystems, fish passage, natural character, amenity and recreational values, and the ability of groundwater to recharge or discharge (my emphasis)*.

[32] RPS p9 (Introduction Chapter 4: Water)

102 While recreation is identified in the above Issue the term is not specifically mentioned in any of the water quantity objectives or policies in the RPS. Rather it is provided for in the Objectives and Policies as a sub-set of "the needs of a range of uses, including the reasonably foreseeable social, economic and cultural needs of future generations" (WQUAN.1(c ). RPS Policy WQUAN.3(g) also requires regional plans to recognise the outstanding characteristics identified in water conservation orders applying to rivers within the region (which include some recreation values).

103 Finally, while I agree with the statement in the IPS that the pSWLP is not inconsistent with the two relevant Water Conservation Orders, the pSWLP would be more aligned with the Water Conservation Orders if the term "recreational values" (as a subset of outstanding amenity values recognised for the Mataura and Oreti Rivers) is reinstated in Objective 9.

***Inclusion of 'margins'***

104 Mr McCallum-Clark considers that "margins" need not be incorporated into Objective 9 because it will overlap with Objective 17. Ms McArthur[33] explains why Objective 9 should be amended to include reference to the safeguarding of "margins", noting that Objective 17 only deals with the protection of natural character.

***Recommendation***

105 For the reasons stated above and having regard to the evidence of Mr McCallum-Clark and Ms McArthur, I consider the pSWLP should have specific reference to safeguarding "margins" and "recreation values" in Objective 9. I recommend the following amendment to Objective 9:

> *The quantity of water in surface waterbodies managed so that aquatic ecosystem health, life-supporting capacity, outstanding natural features and landscapes, <u>recreational values</u> and natural character <u>of waterbodies and their margins</u> are safeguarded*

<u>OBJECTIVES 13, 13A AND 13B</u>

106 As now structured Objective 13 is a stand-alone policy that is enabling of economic, social, and cultural wellbeing and is unqualified in relation to avoiding, remedying or mitigating adverse effects on the important values prescribed under 13A and 13B.

[33] McArthur EiC at [73-75] and [82]

107 Firstly, I agree with Mr McCallum-Clark that splitting the Objective into three has lost the element of enabling activities within limits, which was originally intended. As discussed above in relation to the splitting of Objective 9 and 9A the NPSFM prioritises safeguarding environmental values and people and communities' health. Therefore, it is appropriate that the matters provided for in Objective 13 are subject to the environmental limits set out in 13A and 13B respectively. Objective 13 should therefore be amended to include Objectives 13A and 13B as qualifiers as originally notified.

108 I also agree with Mr McCallum-Clark that notified Objective 13[34] *"provided a level of protection for land-based ecosystems, amenity values, and cultural values, which are not provided for in Objectives 9, 14 and 17. With the deletion of clause (c), there is limited provision for protection of land-based ecosystems, cultural values and amenity values".* Mr McCallum-Clark says "*there may be merit in exploring the reinstatement of clause (c) as requested directly or indirectly by all appellants*" but does not take this statement further. In my opinion there is no apparent reason why it is appropriate for these matters to be removed from the Objectives framework and to provide for the use and development of land and soils to support the economic, social, and cultural wellbeing of the Region without any consideration of the land-based ecosystems, amenity values (including recreation values), and cultural values. These matters are all relevant to consider when implementing Part 2 and directions under the RPS[35].

109 In order to align with Environment Southland's functions under s.30 and the directions in the NPSFM and RPS I consider it also appropriate for the Objective refer to "indigenous biological diversity" rather than "ecosystems (including diversity and integrity of habitats)". Biological diversity is more than diversity of habitats and both should be referred to.

110 I consider it is appropriate for the Objective to ensure that discharges of contaminants to land or water avoid adverse effects on human health rather than only avoiding "significant or cumulative effects".

111 While I agree with Mr McCallum-Clark that there may be situations where remedying or mitigating effects from discharges may be appropriate, I consider

[34] *Objective 13 in the Notified version of the pSWLP stated that: Enable the use and development of land and soils, provided: (a) the quantity, quality and structure of soil resources are not irreversibly degraded through land use activities and discharges to land; (b) the discharge of contaminants to land or water that have significant or cumulative effects on human health are avoided; and (c) adverse effects on ecosystems (including diversity and integrity of habitats), amenity values, cultural values and historic heritage values are avoided, remedied or mitigated to ensure these values are maintained or enhanced*

[35] For example Policies BIO.2, BIO.3, Bio.4 (in relation to protecting and maintaining biological diversity). Refer discussion above on Objectives 9and 9A in relation to recreation.

such effects can occur within the parameters of the effects being "minor or transitory" (being "thresholds" deemed by the Court[36]) potentially able to occur without falling foul of the absolute requirement to avoid adverse effects). Remedying or mitigating (rather than avoiding) significant effects is unlikely to be consistent with maintaining water quality.

112 Finally, in respect of soil resources (Objective 13A) I consider it is appropriate that the quantity, quality and structure of soil resources should be maintained and activities managed to avoid "irreversible degradation". I therefore support amending the objective to accommodate parts of the relief sought by Forest and Bird and Fish and Game.

***Recommendation***

113 I recommend amending Objective 13 so that it similar to the notified version, with further amendment, as follows (or alternatively with like effect):

> *Enable the use and development of land and soils, provided:*
>
> *a) the quantity, quality and structure of soil resources are maintained and managed to avoid irreversible degradation ~~not irreversibly degraded through~~ from land use activities and discharges to land;*
>
> *b) the discharge of contaminants to land or water that have significant or cumulative effects on human health are avoided; and*
>
> *c) adverse effects on ecosystems (including indigenous biological diversity and integrity of habitats), amenity values, recreation and cultural values and historic heritage values are avoided, remedied or mitigated to ensure these values are safeguarded ~~maintained~~ or enhanced.*

OBJECTIVE 14

114 Forest & Bird are seeking that Objective 14 be amended as follows:

> *The range and diversity of indigenous ecosystem types and habitats within dryland environments, rivers, estuaries, wetlands and lakes, including their margins, and their life-supporting capacity are maintained or enhanced.*

115 Upon consideration Mr McCallum-Clark[37] states that:

> *The submission of Invercargill City Council requests Objective 14 be amended to remove the reference to "dryland environments" from the Objective. In response to this submission, the Reporting Officers agreed that this part of the provision could result in duplication with territorial authority functions and recommended that the reference to "dryland*

[36] In Environmental Defence Society Inc v New Zealand King Salmon [2014] NZSC38.
[37] EiC at [158-159]

*environments" be removed.*

116 I do not agree that there will be repetition with Territorial Functions or that reference to "dryland environments" in Objective 14 will lead to any inappropriate inefficiencies. Firstly, the Method referred to by Mr McCallum-Clark says that Territorial authorities will be "primarily" responsible for specifying the objectives, policies and methods for the control of the use of land for the maintenance of indigenous biodiversity on all land excluding the coastal marine area, wetlands, and lakes and rivers and their margins. The Method does not prevent Environment Southland from fulfilling its functions to maintain indigenous biodiversity as required by s30 of the RMA. Secondly, and of more particular relevance to this matter, Territorial Authorities (as far as I am aware) have no intention (or stated mandate) to manage activities on the dryland environment which affect water quality.

117 I understand that the management of critical source areas (which are practically dryland environments until they become wet or flood) is vital in the management of freshwater quality in Southland. The deletion of dryland environments and failure to refer to species will not assist in the maintenance of indigenous biodiversity[38] and I agree with the reasons in the appeal by Forest & Bird that reference to dryland environments is needed in order to set an objective to guide decision-makers in the implementation of Rule 79 High Country burning. Of more importance, in my opinion, is the deletion of "dryland environments" risks creating a policy gap in the need to manage "critical source areas" which are known to be a significant pathway for contaminants to enter waterbodies.

***Recommendation***

118 I recommend amending Objective 14 as follows:

> *The range and diversity of indigenous ecosystem types and habitats <u>within dryland environments</u>, rivers, estuaries, wetlands and lakes, including their margins, and their life-supporting capacity are maintained or enhanced*

<u>OBJECTIVE 17</u>

119 Objective 17 relates to the natural character values of wetlands, rivers and lakes and their margins.

120 I agree with Forest & Bird that the relief they are seeking to Objective 17 (inclusion of the phrase "preserve" natural character) is more appropriate compared to the Decisions version which excludes this phrase. Section 6(a) clearly has two distinct

[38] RPS Policies BIO.2, BIO.3, and BIO.4 direct protection or maintenance of indigenous biological diversity.

elements and, in my opinion, it is clear that specific consideration is to be given to the "preservation" of the natural character of wetlands, lakes and rivers and their margins as a separate consideration to protecting these features from inappropriate development.

121 I do not agree with Mr McCallum-Clark that "preserved" and "protected" are not different. In my view the action of recognising and providing for the "preservation" of the natural character of wetlands, lakes and rivers and their margins is distinctively separate and sets a higher (more restrictive) threshold compared to "protecting from inappropriate development".

122 While it may be true that the Objective "allows for reasonable decisions to be made on a case by case basis as to the level of appropriate protection of natural values to be applied, ranging from preservation where the values are very high, to little protection where the natural character values are very low", the absence "preserving natural character" creates a risk that this matter of national importance will not be afforded due consideration and I consider there is no risk or inefficiency in including this clear direction in Part 2. Flexibility can be applied in determining what is "inappropriate" development and what is required to "protect" natural character in the context where the outcome (preservation of natural character) is clearly stated.

123 I agree with Mr McCallum-Clark that the term "preserved" is difficult to quantify in terms of habitat quality when that habitat is not significant, and that the term introduces uncertainty or is inappropriately restrictive. However, the threshold is a clear directive of s.6a.

***Recommendation***

124 I recommend amending Objective 17 as sought by Forest and Bird:

> *The natural character values of wetlands, rivers and lakes <u>and their margins</u> including channel form, bed rapids, seasonably variable flows and natural habitats, are <u>preserved and</u> protected from inappropriate use and development.*

<u>OBJECTIVE 18</u>

125 I agree with Mr McCallum-Clark (and his reasoning) that inserting the term "environmental" is appropriate because it helps clarify the intent of the Objective to apply to all activities, not just farming activities. The intention of the Objective is to promote good environmental management practice, not just good management practices.

126 The relief sought by Fish & Game is focused on seeking to ensure activities apply the BPO to:

> *optimise efficient resource use and achieve the following*
> *(a) Soil conservation;*
> *(b) Maintain and improve water quality;*
> *(c) Maintain or improve water quantity; and*
> *(d) Maintain and improve ecosystems in freshwater*

127 In relation to farming activities, the definition of Good Management Practices does not, insofar as I can tell, include or require the BPO to be included. Therefore, in my opinion use of the term Good Management Practices (in the polices and rules relating to farming) does not implement direction of Policy A3(2).

128 In my opinion amending the Objective to direct that activities apply the BPO for achieving the matters a-d is appropriate because it helps implement, and is consistent with, the requirements of s.30(1)(c)(i) of the Act and the directives under the NPSFM, particularly Policy A3(b), which directs that regional councils:

> *b) where permissible, making rules requiring the adoption of the **best practicable option** to prevent or minimise any actual or likely adverse effect on the environment of any discharge of a contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.*

129 The term BPO is used in the pSWLP in Policy 16A in relation to Industrial and trade processes that may affect water quality, and Policy 36 in relation to the management of contaminated land.

130 I agree with Mr McCallum-Clark that Good [Environmental] Management Practice should be encouraged. Therefore, I do not support the relief by Fish & Game to delete the text in the Objective or delete the references to safeguarding the "life supporting capacity" of the Region's soils. Rather, the additional text sought by Fish & Game can be included as a second part to the Objective.

131 An alternate option I support is to amend the definition of Good [Environmental] Management Practice so that, in practice, the Objective has a clear link to applying the BPO for: (a) Soil conservation; (b) Maintain and improve water quality; (c) Maintain or improve water quantity; and (d) Maintain and improve ecosystems in freshwater. The definition of "Good Management Practices" currently only refers to the various GMP factsheets available on Environment Southland's website which may be altered from time to time (without full consultation).

132 Finally, as a small point, for consistency with other parts of the pSWLP and the RPS I also consider the Objective 18 should refer to "maintain and improve", not maintain or improve". The latter directs that maintenance is sufficient where in reality the majority of management practices will need to be undertaken to improve water quality to achieve ecosystem health.

***Recommendation***

133 I recommend amending Objective 18 as follows:

> *All activities operate in accordance with "good environmental management practice" or better to optimise efficient resource use, safeguard the life supporting capacity of the region's land and soils, and maintain or improve the quality and quantity of the region's water resources.*
>
> *All activities implement the best practicable option to optimise efficient resource use and achieve the following:*
>
> *(a) Soil conservation;*
>
> *(b) Maintain and improve water quality;*
>
> *(c) Maintain or improve water quantity; and*
>
> *(d) Maintain and improve ecosystems in freshwater*

POLICIES 4-12A (PHYSIOGRAPHIC ZONE POLICIES)

134 Policies 4-12 direct outcomes and methods for each Physiographic Zone.

135 The Physiographic Zone framework is summarised by Dr Snelder and Mr McCallum-Clark outlines the issues raised in submissions and appeal points on this matter. Ms McArthur has considered the merits of the Physiographic Zone framework.

136 The notified plan included a framework for physiographic zones that included policies and rules. The decisions version has retained the policy framework but has removed the rules. The Farm Environment Management Plan requirements still refer to the physiographic zones.

137 This means that despite the physiographic zone policy references to "prohibiting" dairy farming and intensive winter grazing (Alpine Zone) or "generally not granting" consent for dairy farming or intensive winter grazing where contaminant losses will increase as a result of the proposed activity (Central Plains, Old Mataura, Oxidising, Riverine Zones) the rules do not directly refer back to this approach. This is primarily a Topic B matter, but it is important to note the disconnect in the pSWLP now as it affects how these policies are framed.

138 The Forest & Bird appeal seeks amendments to Policies 4-12 to ensure that they only provide for activities where water quality will be maintained or enhanced where degraded. It also seeks changes to Policies 4, 9, 10 and 11 to make dairy farming, intensive winter grazing and cultivation prohibited where these policies apply (Alpine, Old Mataura, Oxidising and Peat Wetland physiographic zones). The Fish & Game appeal is focussed on the language used in these policies in relation to discouraging vs generally not granting resource consents for particular activities, although Fish & Game also has more general appeal points.

139 I have reviewed the evidence of Mr Rodway and Ms McArthur in relation to the areas of the region that are at risk of further degradation and which require improvement to achieve ecosystem health (in terms of Ms McArthur's and Prof Death's evidence). What is apparent is that regardless of physiographic zone, controls are needed for all land affected by overland flow (o) and artificial drainage (a) variants, and all land contributing to degrading water quality in estuaries and lagoons as a minimum. While all the technical experts appear in agreement that a physiographic zone framework is useful, Ms McArthur's evidence[39] is that a physiographic zone approach does not address the over-riding influence of the variants on water quality risk, nor does it address the issue of estuaries and lagoons which show a degrading water quality trajectory, and a broader approach is needed in the pSWLP.

140 Ms McArthur[40] considers that for waterbodies where there is clear evidence that these activities are already significantly adversely affecting ecosystem health and life-supporting capacity, prohibiting activities that generate further effects is the most certain way of halting continued water quality degradation. The Physiographic Zone Policies 4, 9, 10 and 11 could address this issue by prohibiting new/additional dairy farming, intensive winter grazing and cultivation activities where these policies apply.

141 That does not address all land affected by overland flow (o) or artificial drainage (a) variants however, and so I would support amendments to the policies which direct a consent regime in physiographic zones 6, 10 and 12 (where those variants also apply).

142 In addition, Ms McArthur[41] states the following in relation to existing land uses:

> *For all areas with the (o) overland flow or (a) artificial drainage variants there is a significantly elevated likelihood of adverse effects on water quality across the region, regardless of the*

[39] McArthur EIC at [92]
[40] McArthur EIC at [92]
[41] McArthur EIC at [94]

> *physiographic zone or catchment. Not only do degrading trends in water quality need to be managed through ceasing further intensification (issue 1), but the effects of existing land use need to be addressed at the regional level, particularly on land with (o) or (a) variants, and including all land contributing to degraded estuaries or lagoons*

143 The amendments I recommend below assume that a rules framework that implements the physiographic zone policies will be applied. Regardless of whether this is achieved through the physiographic zone policies or separately, I consider there is a clear need for the policy framework to establish a region-wide approach to controlling intensification and existing land uses which are contributing or would contribute to ongoing water quality degradation.

144 As described by Dr Snelder[42] the Physiographic Zones:

> *Can provide a basis for directing certain activities away from situations in which they may pose a particular risk because of dominant flow paths and water quality risks…*
>
> *Could be used as a starting point for identifying the dominant flow paths, water quality risks and mitigation objectives at the scale of individual properties given their membership of a Physiographic Zone.*

145 Dr Snelder qualifies the usefulness of the Physiographic Zone framework by identifying three key limitations, which I summarise as:

145.1 The Physiographic Zone descriptions are too coarse (there are actually additional or different "sub-zones" within each of the nine zones).

145.2 Physiographic Zone boundaries are not static.

145.3 The Physiographic Zone boundaries need to be ground-truthed.

146 I consider the limitations can be distilled into one limitation – the Physiographic Zone framework requires ground truthing in order to be accurate at an individual property scale.

147 Based on the limitation(s) Dr Snelder concludes:

> *Because of these limitations, I do not consider it would be generally appropriate to specify actions associated with managing water quality risks for individual properties based purely on that property's membership of a physiographic zone (as defined by the map). Relying on the property's membership of a Physiographic Zone may result in inappropriate actions in some circumstances.*

[42] Snelder EiC at [16] and [55]

148 I agree with Mr McCallum-Clark and Ms McArthur that the Physiographic Zone approach is an appropriate tool for managing the effects of land use activities.

149 If the limitation with applying the Physiographic Zone framework is that it needs to be ground-truthed then I agree with Ms McArthur that this can be overcome and the physiographic zones and the associated policy framework should be retained in the pSWLP.

150 Having considered the IPS and evidence of Dr Snelder, Mr McCallum-Clark, and Ms McArthur I consider the physiographic approach is an appropriate management tool for "*directing certain activities away from situations in which they may pose a particular risk because of dominant flow paths and water quality risks*"[43].

151 I do not agree with Mr McCallum-Clark[44] that the use of, or reliance on, physiographic information is sufficient as a non-regulatory method. Based on the evidence of Ms McArthur I consider there is sufficient scientific / technical information to justify:

151.1 Requiring all rural land uses to employ mitigations (Good Environmental Management Practice or BPO) tailored to the respective land use and physiographic zone.

151.2 Subject to addressing the limitations described above, amending the policies to direct decision-makers to "not" grant resource consent for the respective land uses within each physiographic zone instead of "generally not grant" or "strongly discourage".

151.3 Critical changes to land use and land management practices now, not in several years when the NOF processes are implemented.

152 I acknowledge the Physiographic Zone descriptions used in the pSWLP are simplified and there are some inaccuracies with the mapped boundaries at the individual property scale. For this reason, I agree with Mr McCallum-Clark that the Physiographic Zone boundaries should not be used as a method for triggering <u>different</u> activity status. However, provided the policy (or consenting) framework is flexible enough to allow inaccuracies to be identified through ground-truthing, the limitations described by Dr Snelder should not have a material effect on the Physiographic Zone policies themselves.

153 On one view, the issues with ground truthing support the need for a broader, region-

[43] Snelder EiC at [16]
[44] McCallum-Clarke EiC at [227]

wide approach to managing land affected by overland flow **'(o)'** or artificial drainage **'(a)'** variants. However, if the focus is to remain on the physiographic zones then I would support an approach as outlined in Policy 12A. A link between Policy 12A and the physiographic zone policies will be required so that some discretion applies to the direction in the physiographic zone policies where additional information demonstrates that the physiographic zone is misapplied to a particular landholding.

154 Recognising that the Bedrock/Hill Country, Gleyed, Lignite/Marine Terraces are different, including the 'o' and 'a' variants, I consider it is appropriate to separate Policy 6 into three separate policies (like the notified version of the pSWLP).

155 I observe the physiographic zone maps included as part of the notified pSWLP were not carried through to the Decision version. In my opinion it is appropriate to include the maps as part of the pSWLP. Policy 12A can be applied as required to help address any inaccuracies with the maps.

***Recommendations***

156 I recommend:

156.1 Including the physiographic maps as part of the pSWLP;

156.2 Separating Policy 6 into three separate policies;

156.3 Direct land uses which may contaminate water to avoid as far as practical, contaminates entering water by promoting the uptake of the Best Practical Option; and

156.4 Direct decision-makers to avoid containments entering water by "not" granting resource consent for activities which are known to pose a high risk to water quality within each respective physiographic zone.

157 I recommend the following specific amends to the policies, or amendments with like effect:

> *Physiographic Zone Policies*
>
> *Policy 4 – Alpine*
>
> *In the Alpine physiographic zone, avoid, remedy, or mitigate erosion and adverse effects on water quality from contaminants, by:*
>
> *1. requiring implementation of good management practices <u>or the best practical option</u> to <u>avoid as far as practical</u> ~~manage~~ erosion and ~~adverse effects on water quality from~~ contaminants <u>entering water</u> transported via overland flow;*
>
> *2. ~~having particular regard to~~ <u>avoiding as far as practical</u> adverse*

*effects of contaminants transported via overland flow when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. prohibiting dairy farming and intensive winter grazing, and decision makers ~~generally~~ not granting resource consents for cultivation where contaminants may enter waterbodies.*

*Policy 5 – Central Plains*

*In the Central Plains physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via artificial drainage and deep drainage;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage and deep drainage when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers ~~generally~~ not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*Policy 6 – Gleyed ~~, Bedrock/Hill Country and Lignite-Marine Terraces~~*

*In the Gleyed ~~, Bedrock/Hill Country and Lignite-Marine Terraces~~ physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or best practical options to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via artificial drainage, and overland flow where relevant; and*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage, and overland flow where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans.*

*3. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow.*

*Policy 7~~6~~ – ~~Gleyed,~~ Bedrock/Hill Country ~~and Lignite-Marine Terraces~~*

*In the ~~Gleyed,~~ Bedrock/Hill Country ~~and Lignite-Marine Terraces~~ physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage~~*

*~~adverse effects on water quality from~~ contaminants entering water transported via artificial drainage, and overland flow where relevant; and*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage, and overland flow where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans.*

*3. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow and artificial drainage.*

*Policy 8~~6~~ – ~~Gleyed, Bedrock/Hill Country and~~ Lignite-Marine Terraces*

*In the ~~Gleyed, Bedrock/Hill Country and~~ Lignite-Marine Terraces physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via artificial drainage, and overland flow where relevant; and*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage, and overland flow where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans.*

*3. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow and artificial drainage.*

*Policy 9 – Old Mataura*

*In the Old Mataura physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via deep drainage;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via deep drainage when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers generally not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*Policy 10 – Oxidising*

*In the Oxidising physiographic zone, avoid, remedy, or mitigate*

*adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via deep drainage, and overland flow and artificial drainage where relevant;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via deep drainage, and overland flow and artificial drainage where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers generally not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*4. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow and artificial drainage.*

*Policy 11 – Peat Wetlands*

*In the Peat Wetlands physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via artificial drainage, deep drainage, and lateral drainage;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage, deep drainage, and lateral drainage when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers generally not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*Policy 12 – Riverine*

*In the Riverine physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via deep drainage, and overland flow where relevant;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via deep drainage, and overland flow where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers generally not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*4. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow.*

*Policy 12A – Improved physiographic zone information*

*Where site specific information is available that better identifies or delineates the relevant physiographic zones or contaminant loss pathways for a landholding or site, that information must be taken into account when undertaking activities, preparing Farm Environmental Management Plans or when determining resource consent applications for that landholding or site.*

POLICIES 45, 46, 47 (FMU POLICIES)

***Polices 45 and 47***

158 Policies 45 and 47 relate to the relationship between the pSWLP and the FMU sections, that are to be developed under the NOF.

159 Fish & Game seeks that the following words be added to Policy 45:

*"The provision in the relevant FMU Section of this plan is not more lenient or less protective of water quality, quantity or aquatic ecology than the Region-wide Objectives and Region-wide Policies".*

160 Fish & Game also sought to delete the "Note" on Policy 45 that currently reads:

*"It would be unfair if changes are made to Region-wide objectives and policies, which apply in other parts of Southland, without the involvement of those wider communities".*

161 Fish & Game seeks the following relief for Policy 47 (refer underlining):

*"The FMU sections will support the implementation of region wide objectives by:*

*1. identifying values and establishing specific freshwater objectives for each Freshwater Management Unit, including where appropriate at a catchment or sub-catchment level, having particular regard to the national significance of Te Mana o te Wai, and any other values developed in accordance with Policies CA1-CA4 and Policy D1 of the National Policy Statement for Freshwater Management 2014 (as amended in 2017); and*

*2. set water quality and water quantity limits and targets to achieve the region wide and specific freshwater objectives; and*

*3. set methods to phase out any over-allocation, within a specified timeframe; and*

*4. assess water quality and quantity taking into account Ngai Tahu indicators of health."*

162 The Commissioners' Recommendations, in relation to Policy 47, stated:[45]

> *"The detail of the FMU process is a matter for Council to decide as part of their annual planning process. FMU-specific values, freshwater objectives and limits will be developed (for catchments or subcatchments if appropriate) as part of the FMU process, having regard to all relevant statutory instruments".*

163 Firstly, I generally agree with the commentary by Mr McCallum-Clarke in relation to the "Note" under Policy 45 and (contrary to Fish & Game's appeal point to delete it) I consider that this note is appropriate.

164 In relation to the issue whether FMU policies could possibly be more lenient than Region-wide policies, I agree that FMU specific values will be developed in due course, in accordance with the NOF. However, as stated in Prof Death's evidence, the NOF has a compulsory value ("ecosystem health") for which freshwater objectives can be set now (the NOF also has a compulsory national value for "Human health for recreation", however Prof Death's evidence does not focus on that value).

165 For compulsory values that can be articulated now in numeric (rather than narrative) terms, I am unsure why there is a need to await FMU processes prior to including those in the pSWLP, if the scientific information is available to do so. It would not preclude later community identification of specific values, for other national (non-compulsory) values such as "natural form and character", "fishing", "irrigation, cultivation and food production", "animal drinking water" etc. Some of these values may require the level of water quality to be improved from the ecosystem health 'bottom lines' set out in Prof Death's evidence. I do not consider that any values would allow the level of water quality to be lowered below those bottom lines. In my opinion, the NPSFM does not allow the value of "ecosystem health" to be traded-off.

166 In this respect I agree with Mr McCallum-Clark's evidence that:

> *241 In my opinion, the very purpose of the FMU processes is to develop local water quality and quantity limits and targets, and freshwater objectives, based on the identification of local values and uses. This is within a clear framework established by the NPS-FM, RPS and the pSWLP of maintaining water quality and improving it where it is overallocated and reducing any water quantity over allocation.*

167 While the policy direction in the RPS and NPSFM refers to the NOF process, the NOF process is not the only process.

[45] At page 75.

168 I anticipate the numeric outcomes Prof Death describes could be used to inform the compulsory bottom line for ecosystem health under the NOF. As outlined in my evidence above (drawing on the higher order policy direction) numeric outcomes can be applied which, if met, will protect ecosystem health as is required by the RMA, NPSFM and the RPS. This would provide a much-needed ability to manage the cumulative effects of diffuse discharges.

169 Mr McCallum-Clark also says:

> *242 While at this point it might be speculative to suggest the outcomes of the FMU processes, there are may be situations where different objectives and policies are appropriate at a local scale. Whether these objectives and policies are indeed more or less lenient, or just different, could lead to frustrations with this process and the discounting of policy options that might otherwise be valid.*

170 I am mindful that the PIP identifies that one or more plan changes will be required to the pSWLP in order to include the respective freshwater objectives, limits and targets developed via the NOF process. The NOF process allows specific freshwater objectives to be developed at a finer scale, and the process can focus on the catchment loading of nutrients and targets for reducing or in places potentially increasing these loads and setting more refined "limits" and specific "targets". In some respects it is a moot point whether Policy 45 includes the words "not more lenient", because a FMU plan change could even amend that provision (although as stated in the "Note" under Policy 45, it is not intended that FMU processes could alter Region-wide objectives). The NOF plan changes will allow an opportunity for any party interested in the specific freshwater objectives, limits and targets, to support or oppose the NOF outcomes. But I consider that providing strong guidance in the pSWLP on some 'bottom line' freshwater outcomes will assist the FMU process, not hinder it. It would also provide consistency across the Region for measures of "ecosystem health". In this respect, I am concerned about Mr McCallum-Clark's reference to "*just different [objectives]* …"[46]. Prof Death's evidence is that the essential parameters necessary to manage ecosystem health in Southland's rivers and streams are MCI, QMCI, Nitrogen, Phosphorus, sediment (and periphyton in NPSFM). I understand similar parameters are included in other regional plans.[47]

171 Therefore, with the exception of the "Note" below Policy 45, I do not agree with Mr McCallum-Clark[48] that the relief sought by Fish & Game is not appropriate.

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[46] At [242]
[47] The Horizons One Plan sets water quality numerics for MCI, DRP and SIN (soluble inorganic nitrogen) as well as deposited sediment cover, and a number of other parameters. The more recently notified Proposed Natural Resources Plan for the Greater Wellington Region sets ecosystem health "objectives" in its Objective O25 that include numerics for MCI, periphyton biomass and periphyton cover.
[48] Par 244

172 There will be risks from adopting this approach, and no doubt the numerics suggested by Prof Death will be tested in evidence. However, the risk of not acting (i.e. not imposing interim outcomes that apply across the region) is that there will be no consistent region-wide approach to prevent water quality from further degradation, and as a result water quality will get worse rather than better. This is a very significant risk in the context of the Southland Region.

173 I observe Mr McCallum-Clark states at [262] that "*any changes made through FMU processes may well be seeking to better implement the Region-wide objectives and policies."* I agree. The NOF process provides the opportunity to refine and prioritise freshwater objectives in more localised way. However, the NPSFM does not allow 'trade offs' in respect of the compulsory values under NOF.

174 If region-wide outcomes are carried through into the NOF process then parties who support those outcomes will not have to repetitively contribute their resources into each FMU process in relation to region-wide matters.

***Recommendation***

175 Amend Policy 45 as follows:

> *In response to Ngāi Tahu and community aspirations and local water quality and quantity issues, FMU sections may include additional catchment-specific values, objectives, policies, attributes, rules and limits which will be read and considered together with the Region-wide Objectives and Regionwide Policies. Any provision on the same subject matter in the relevant FMU section of this Plan prevails over the relevant provision within the Region-wide Objectives and Region-wide Policy sections, unless ~~it is explicitly stated to the contrary~~. the provision in the relevant FMU Section of this plan is less protective of water quality, quantity or aquatic ecology than the Region-wide Objectives and Region-wide Policies.*
>
> *As the FMU sections of this Plan are developed in a specific geographical area, FMU sections will not make any changes to the Region-wide Objectives or Region-wide Policies.*
>
> *Note: It would be unfair if changes are made to Region-wide objectives and policies, which apply in other parts of Southland, without the involvement of those wider communities.*

176 Amend Policy 47 as follows:

> *The FMU sections will support the implementation of region wide objectives by:*
>
> *1. identifying values and establishing specific freshwater objectives for each Freshwater Management Unit, including where appropriate at a catchment or sub-catchment level, having particular regard to the national significance of Te Mana o te Wai, and any other values developed in accordance with Policies CA1-CA4 and Policy D1 of the National Policy Statement for Freshwater Management 2014 (as*

*amended in 2017); and*

*2. set water quality and water quantity limits and targets to achieve the region wide and specific freshwater objectives; and*

*3. set methods to phase out any over-allocation, within a specified timeframe; and*

*4. assess water quality and quantity taking into account Ngai Tahu indicators of health."*

***Policy 46***

177 I have reviewed the evidence of Ms Robertson and Ms McArthur in relation to the issue of whether the Waituna Lagoon catchment should be its own FMU or a "sub-unit". Ms Robertson recommends the Waituna Lagoon catchment should not be a sub-unit because:

> *(a) More resources and time required to run an additional process;*
>
> *(b) The RAMSAR site would be split between different FMUs (Ōreti and Waituna);*
>
> *(c) It would result in the different treatment of Waituna to other similar catchments; and*
>
> *(d) It may have potential impacts on existing community relationships.*

178 Among other reasons for supporting the Waituna Lagoon as being its own FMU Ms McArthur points out that:

178.1 The Awarua-Waituna Wetlands is one of the largest remaining wetland complexes in New Zealand and is important for its biodiversity and cultural values.

178.2 There is already a multi-agency catchment co-management programme for Waituna Lagoon, with dedicated funding, and an extensive body of scientific and socio-economic research specific to the lagoon and its catchment has been completed to date, including specific physiographic risk and mitigation assessments.

178.3 A large proportion of the wetlands lost or at risk are within the catchment of the Awarua Wetland, adjacent to and connected to the Waituna Lagoon

178.4 Priority protection of aquatic ecosystems in the wider catchment of the Awarua-Waituna complex is needed

178.5 There is a clearly defined community of interest who have been working together for some time to understand the issues and find solutions for Waituna.

178.6 Waituna Lagoon is further advanced down the FMU process than other parts of the Southland Region.

178.7 Including Waituna within the Mataura FMU process would be counter to the level of effort already spent and would potentially allow outside interests to be involved in catchment decision-making for Waituna, contrary to the intent of a community collaborative process under the NPS-FM.

178.8 Including Waituna as part of the Mataura FMU process carries a risk that the priority needs of this internationally significant and at risk wetland system and contributing catchment may be lost within a wider process.

179 In addition to Ms McArthur's evidence I note the following:

179.1 Policy 21 in the NZCPS directs that priority is to be given to the need to improve deteriorated coastal water quality in certain circumstances[49]. Ms McArthur's evidence confirms that despite Waituna Lagoon's international significance due to its biodiversity and cultural value, it has poor water quality, TN exceeds bottom lines and chlorophyll a increases when closed, and it experiences eutrophication and cyanobacteria/algal blooms.[50] Waituna Lagoon therefore should meet the prioritisation triggers of Policy 21, which reinforces the appropriateness of Ms McArthur's recommendation (and the relief sought by Forest & Bird) to make the Waituna Lagoon Catchment a standalone FMU (so that it can be prioritised).

179.2 Policy WQUAL.5 in the RPS also seeks to identify and prioritise freshwater management units. If Waituna is treated as part of the wider Mataura FMU it may not be prioritised.

179.3 Policy WQUAL.4 in the RPS is specific to the Awarua Wetland and it references the FMU process:

> *Policy WQUAL.4 – Awarua Wetland*
>
> *Enhance the water quality of the Awarua Wetland by ensuring that discharges of contaminants and land use activities both individually and on a cumulative basis have no more than minor adverse effects on the significant characteristics and water quality of the Awarua Wetland.*
>
> *Explanation/Principal Reasons*
>
> *This policy sets the overall threshold for managing activities within the Awarua Wetland. Awarua Wetland is recognised for*

[49] Where the quality of water in the coastal environment has deteriorated so that it is having a significant adverse effect on ecosystems, natural habitats, or water based recreational activities, or is restricting existing uses, such as aquaculture, shellfish gathering, and cultural activities.
[50] Table 1.

> *its international significance under the Convention on Wetlands of International Importance (also known as the Ramsar Convention) and is currently degraded as a result of deteriorating water quality. In order to protect the values of this wetland water quality should be enhanced. This will occur through the FMU process under the NPS-FM. The Ramsar Convention designation includes a map and geographic coordinates specifying the boundary of the Awarua Wetland.*

179.4 The significance of the Waituna Wetland to Ngāi Tahu is recognised by a Statutory Acknowledgement under the Ngāi Tahu Claims Settlement Act 1998[51].

179.5 Given all of the above, coupled with the policy direction for applying an integrated management approach (outlined earlier in my evidence), I agree with Ms McArthur that "*specific recognition of Waituna via bespoke policy development aimed at preserving and protecting the lagoon and its significant values is warranted in the Plan and should be included as soon as possible*".

***Recommendation***

180 I recommend amending Policy 46 to add Waituna as a standalone FMU and amend map series 7 accordingly.

[51] RPS p.10, chp 1 and Appendix 1 - Page 251.

## 6. SUMMARY OF RECOMMENDED AMENDMENTS

181 Amend Objective 2 as follows:

> *Water and land is recognised as an enabler of ~~primary production and~~ economic, social and cultural wellbeing of the region (including productive economic opportunities) within limits*

182 Amend Objective 6 as follows:

> *There is no reduction in the ~~overall~~ quality of freshwater, and water in estuaries and coastal lagoons, by:*
>
> *(a) maintaining the quality of water in waterbodies, estuaries and coastal lagoons, where the water quality is not degraded; and*
>
> *(b) improving the quality of water in waterbodies, estuaries and coastal lagoons, that have been degraded by human activities.*

183 Amend Objective 7 as follows:

> *Any further over-allocation of freshwater (water quality and quantity) is avoided and any existing over-allocation is phased out in accordance with freshwater objectives, freshwater quality limits and timeframes established under Freshwater Management Unit processes, or earlier where the resource is being used to a point where a region-wide freshwater numeric outcome(s) are no longer being met.*

184 Combine and amend Objectives 9 and 9A as follows:

> *The quantity of water in surface waterbodies managed so that aquatic ecosystem health, life-supporting capacity, outstanding natural features and landscapes, recreational values and natural character of waterbodies and their margins are safeguarded*

185 Combine and amend Objectives 13, 13A and 13B so that it similar to the notified version, as follows:

> *Enable the use and development of land and soils, provided:*
>
> *a) the quantity, quality and structure of soil resources are maintained and managed to avoid irreversible degradation ~~not irreversibly degraded through~~ from land use activities and discharges to land;*
>
> *b) the discharge of contaminants to land or water that have significant or cumulative effects on human health are avoided; and*
>
> *c) adverse effects on ecosystems (including indigenous biological diversity and integrity of habitats), amenity values, recreation and cultural values and historic heritage values are avoided, remedied or mitigated to ensure these values are safeguarded ~~maintained~~ or enhanced.*

186 Amend Objective 14 as follows:

> *The range and diversity of indigenous ecosystem types and habitats within dryland environments, rivers, estuaries, wetlands*

*and lakes, including their margins, and their life-supporting capacity are maintained or enhanced.*

187 Amend Objective 17 as follows:

*The natural character values of wetlands, rivers and lakes and their margins including channel form, bed rapids, seasonably variable flows and natural habitats, are preserved and protected from inappropriate use and development.*

188 Amend Objective 18 as follows:

*All activities operate in accordance with "good environmental management practice" or better to optimise efficient resource use, safeguard the life supporting capacity of the region's land and soils, and maintain or improve the quality and quantity of the region's water resources.*

*All activities implement the best practicable option to optimise efficient resource use and achieve the following:*

*(a) Soil conservation;*

*(b) Maintain and improve water quality;*

*(c) Maintain or improve water quantity; and*

*(d) Maintain and improve ecosystems in freshwater*

189 Amend Policies 4-12 as follows:

*Policy 4 – Alpine*

*In the Alpine physiographic zone, avoid, remedy, or mitigate erosion and adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage~~ erosion and ~~adverse effects on water quality from~~ contaminants entering water transported via overland flow;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects of contaminants transported via overland flow when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. prohibiting dairy farming and intensive winter grazing, and decision makers ~~generally~~ not granting resource consents for cultivation where contaminants may enter waterbodies.*

*Policy 5 – Central Plains*

*In the Central Plains physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via artificial drainage and deep drainage;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage and deep drainage when assessing resource consent*

*applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers ~~generally~~ not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*Policy 6 – Gleyed ~~, Bedrock/Hill Country and Lignite-Marine Terraces~~*

*In the Gleyed ~~, Bedrock/Hill Country and Lignite-Marine Terraces~~ physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or best practical options to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via artificial drainage, and overland flow where relevant; and*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage, and overland flow where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans.*

*3. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow.*

*Policy 7~~6~~ – ~~Gleyed,~~ Bedrock/Hill Country ~~and Lignite-Marine Terraces~~*

*In the ~~Gleyed,~~ Bedrock/Hill Country ~~and Lignite-Marine Terraces~~ physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via artificial drainage, and overland flow where relevant; and*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage, and overland flow where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans.*

*3. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminates entering water via overland flow and artificial drainage.*

*Policy 8~~6~~ – ~~Gleyed, Bedrock/Hill Country and~~ Lignite-Marine Terraces*

*In the ~~Gleyed, Bedrock/Hill Country and~~ Lignite-Marine Terraces physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported*

*via artificial drainage, and overland flow where relevant; and*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage, and overland flow where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans.*

*3. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow and artificial drainage.*

*Policy 9 – Old Mataura*

*In the Old Mataura physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via deep drainage;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via deep drainage when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers ~~generally~~ not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*Policy 10 – Oxidising*

*In the Oxidising physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via deep drainage, and overland flow and artificial drainage where relevant;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via deep drainage, and overland flow and artificial drainage where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers ~~generally~~ not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*4. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow and artificial drainage.*

*Policy 11 – Peat Wetlands*

*In the Peat Wetlands physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via artificial drainage, deep drainage, and lateral drainage;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via artificial drainage, deep drainage, and lateral drainage when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers ~~generally~~ not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*Policy 12 – Riverine*

*In the Riverine physiographic zone, avoid, remedy, or mitigate adverse effects on water quality from contaminants, by:*

*1. requiring implementation of good management practices or the best practical option to avoid as far as practical ~~manage adverse effects on water quality from~~ contaminants entering water transported via deep drainage, and overland flow where relevant;*

*2. ~~having particular regard to~~ avoiding as far as practical adverse effects on water quality from contaminants transported via deep drainage, and overland flow where relevant when assessing resource consent applications and preparing or considering Farm Environmental Management Plans; and*

*3. decision makers ~~generally~~ not granting resource consents for additional dairy farming of cows or additional intensive winter grazing where contaminant losses will increase as a result of the proposed activity.*

*4. managing agricultural activities that may contaminate water to apply the best practical option to avoid contaminants entering water via overland flow.*

190 Amend Policy 45 as follows:

*In response to Ngāi Tahu and community aspirations and local water quality and quantity issues, FMU sections may include additional catchment-specific values, objectives, policies, attributes, rules and limits which will be read and considered together with the Region-wide Objectives and Regionwide Policies. Any provision on the same subject matter in the relevant FMU section of this Plan prevails over the relevant provision within the Region-wide Objectives and Region-wide Policy sections, unless ~~it is explicitly stated to the contrary.~~ the provision in the relevant FMU Section of this plan is less protective of water quality, quantity or aquatic ecology than the Region-wide Objectives and Region-wide Policies.*

*As the FMU sections of this Plan are developed in a specific geographical area, FMU sections will not make any changes to the*

*Region-wide Objectives or Region-wide Policies.*

*Note: It would be unfair if changes are made to Region-wide objectives and policies, which apply in other parts of Southland, without the involvement of those wider communities.*

191 Amend Policy 46 to add Waituna as a standalone FMU and amend map series 7 accordingly.

192 Amend Policy 47 as follows:

*The FMU sections will support the implementation of region wide objectives by:*

*1. identifying values and establishing specific freshwater objectives for each Freshwater Management Unit, including where appropriate at a catchment or sub-catchment level, having particular regard to the national significance of Te Mana o te Wai, and any other values developed in accordance with Policies CA1-CA4 and Policy D1 of the National Policy Statement for Freshwater Management 2014 (as amended in 2017); and*

*2. set water quality and water quantity limits and targets to achieve the region wide and specific freshwater objectives; and*

*3. set methods to phase out any over-allocation, within a specified timeframe; and*

*4. assess water quality and quantity taking into account Ngai Tahu indicators of health."*

## 7. CONCLUSION

193 I conclude the Objectives and Policies relating to the Physiographic Zones and FMUs should be amended to provide more direct regulatory oversight across the Region to ensure water quality in Southland is maintained and improved, in the interim, until the localised NOF processes are completed.

**Ben Farrell**

**DATED** this 17th day of February 2018

## WATER QUALITY OBJECTIVES AND EXPLANATIONS UNDER THE OPERATIVE WATER PLAN

***Objective 2 Maintain Water Quality***

***To manage water quality so that there is no reduction in the quality of the water in any surface water body, beyond the zone of reasonable mixing for discharges, below that of the date this Plan became operative (January 2010).***

*Explanation*

*This objective adopts the philosophy of Section 69(3) of the Act. It reflects the fact that in many parts of Southland, particularly in lowland surface water bodies, water quality is poor and should not be allowed to deteriorate further. It also reflects the fact that there are areas of very high-quality water outside Natural State Waters, which should be protected from any overall deterioration in quality. While a one-off or temporary discharge with no long-term impacts on water quality may be acceptable into this high-quality water, a discharge that will result in longterm or permanent deterioration in water quality would not be acceptable. One of the main purposes of this objective is to take into account the cumulative effects of discharges into water.*

***Objective 3 – Surface water bodies other than in Natural State Waters***

***To maintain and enhance the quality of surface water bodies so that the following values are protected where water quality is already suitable for them, and where water quality is currently not suitable, measurable progress is achieved towards making it suitable for them.***

***In surface water bodies classified as mountain, hill, lake-fed, spring-fed, lowland (hard bed), lowland (soft bed) and Mataura 1, Mataura 2 and Mataura 3:***

***(a) bathing, in those sites where bathing is popular;***

***(b) trout where present, otherwise native fish;***

***(c) stock drinking water;***

***(d) Ngāi Tahu cultural values, including mahinga kai;***

***(e) natural character including aesthetics.***

***In surface water bodies classified as mountain lakes and hill lakes:***

***(a) bathing***

***(b) trout***

***(c) Ngāi Tahu cultural values, including mahinga kai***

***(d) natural character including aesthetics***

***In surface water bodies classified as lowland/coastal lakes:***

***(a) native migratory fish;***

***(b) stock drinking water;***

***(c) healthy aquatic habitats;***

***(d) Ngāi Tahu cultural values, including mahinga kai;***

***(e) natural character including aesthetics***

*Explanation*

*In many areas of Southland, water quality is degraded. The first priority is to ensure that the water quality does not degrade further. The objective is then to improve the quality so that it can support the relevant uses and values. The objective shows the values that*

*the consultative process identified for waterbodies outside Natural State waters. Appendix G details the water quality parameters and relevant standards that have been identified as being necessary to protect these values by focusing on the critical or most sensitive values for each waterbody. These "critical values" were agreed through the consultative process. Measurement and monitoring of these parameters will determine whether or not the objectives are being met. Examples of parameters and standards that are relevant to natural character and aesthetics of water quality include conditions relating to bacterial and fungal slime growths and visual clarity.*

*Contact recreation standards are appropriate in areas that are regularly used for bathing and also in hill and mountain lakes where water quality is high. In other water bodies, this standard is unrealistic in the short term. Protection of the instream ecosystem is a more appropriate goal.*

*Maintaining habitat suitable for trout or native fish, as appropriate, will ensure protection of the macroinvertebrate, aquatic plant and periphyton communities on which they depend. All water should be suitable for stock to drink and to support Ngāi Tahu's cultural values. Lowland lakes are at risk of eutrophication, hence the objective to protect against excessive enrichment and excessive sedimentation.*

*Several values are common to a number of different surface water body types. However, achieving the objective may require different tools or take longer, depending on the water classification of the surface water body. These goals will not be met overnight. The objective is therefore to make progress towards achieving them. Progress will be reviewed by monitoring the specified water quality parameters and trends in these parameters. A lack of progress towards the goals may result in a review of the Plan provisions to require stricter standards.*

***Objective 4 – Gradual improvement in surface water quality parameters***

***To manage the discharge of contaminants and encourage best environmental practice to improve the water quality in surface water bodies classified as hill, lowland (hard bed), lowland (soft bed) and spring fed, and in particular to achieve a minimum of 10 percent improvement in levels of the following water quality parameters over 10 years from the date this Plan became operative (January 2010):***

***(a) microbiological contaminants***

***(b) nitrate***

***(c) phosphorus***

***(d) clarity***

*Explanation*

*The quality of water in many surface water bodies does not currently meet the goals in Objective 3. Improvements in lowland streams may be hardest to achieve, due to prevalence of intensive farming in the catchments, and upstream cumulative effects. Discharges of the contaminants specified into hill, lowland and spring fed classes of water body are the most significant barrier to achieving Objective 3. Achieving a reduction in these contaminants will also result in a reduction of other associated contaminants, for example ammonia. Attempting to achieve them in a short timeframe would require significant constraints on both land use activities and direct discharge of contaminants to water.*

*Achieving the Objective will require each land manager to implement best practice with regard to maintenance of soil health, nutrient budgeting and effluent disposal to ensure that any applied nutrients are absorbed by plants. These practices, coupled with riparian management developed in a way that overland flow is filtered through soil, will reduce nutrient and soil inputs into water bodies. As best management practices are implemented in all sectors of the community and resource consents replaced, parameter levels will indicate improvement and determine if higher targets should be set when the Plan is reviewed.*

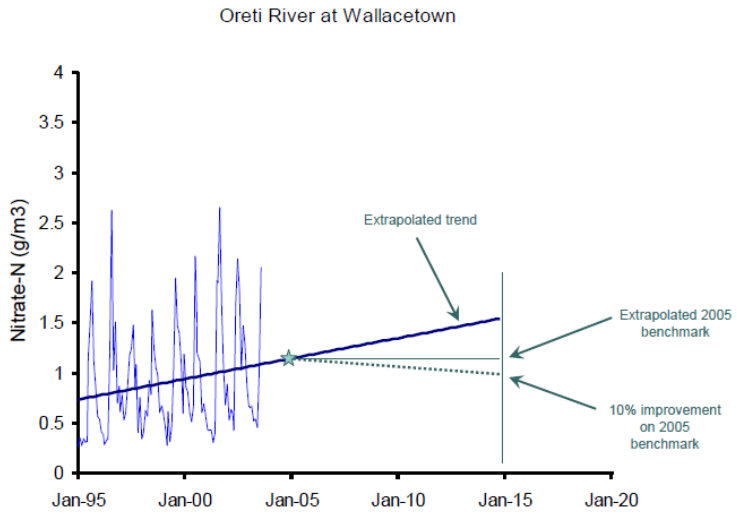
*So how will this approach and level of improvement contribute to reversing the present upward trend levels of contaminants in the lowland, hill and spring-fed water bodies and aid in protecting the values and goals identified in Objective 3?*

*By way of illustration, the figure below shows an example of nitrate*

*concentrations over a ten year period (1995-2004) in the Ōreti River at Wallacetown. The graph provides an example of the potential effect of achieving a 10% improvement in nitrate concentrations.*

*The data shows a positive trend towards increasing nitrate concentrations. The thick black trend line is extrapolated to estimate the nitrate levels in 2015 based on existing trends. The thin black line extrapolates the current 2005 data to establish a benchmark in which to gauge a 10% improvement over the next ten years. The dashed line shows the minimum10% reduction in nitrate concentrations based on the 2005 benchmark.*

*This example demonstrates that for some river and lake parameters the increasing trend will first need to stabilise and reverse before any improvement can be measured. If this trend continues its positive momentum (thick black line) a greater overall improvement will be required to first counteract any increase since 2005 and then achieve a further 10% reduction (dashed line).*




*An improvement of a minimum of 10 percent over the life of the Plan is considered to be a realistic goal given that in many of the water bodies there is an increasing trend in parameter concentrations affecting water quality and the first task is to reverse this trend and then work toward implementing strategies to measure improvements. The approach taken under this objective does not curtail future options of stricter controls if the current approach to progressing toward the long-term goals through the short-term indicators is unsuccessful in achieving the objectives. At the same time however the approach should ensure the current situation does not deteriorate further.*

*Management and improvement of discharges to the said water bodies will require a combination of regulatory and non-regulatory mechanisms.*

*The water quality section of the Plan with associated polices and rules is but one intervention or tool to manage discharges of contaminants and recognise for point and non point sources of pollution. The Regional Effluent Land Application Plan, Regional Solid Waste Management Plan, and policies and rules in the bed disturbance section of this Plan govern management of some sources of these contaminants. A number of sites in Southland are monitored regularly for the parameters listed under Objective 4. Monitoring of these sites will determine success at meeting this objective and where necessary stricter controls on resource consents, higher standards for permitted activities, and advocacy, education and incentives to improve practices that result in the discharge of contaminants through non-point means will be implemented.*