

Wise Response Society Inc.

Oral Submission on Land and Freshwater of the Proposed Regional Policy Statement for Otago

"Nature is not an endless credit card" Jane Goodall

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Presented by Dr Craig Anderson¹ and Dugald MacTavish² on behalf of the Society.

Key land and freshwater submission concepts/points

1. Policy that promotes environmental gain, healthy ecosystem function and restoration in the whole landscape, not just "outstanding" areas.
2. That any local "visions" for water and environmental standards are supported by science and national standards or supported by matauraka Maori (ie cannot be weaker than national standards)
3. For outstanding water bodies, not just protecting the current state, but restoring where quality has been lost due to insufficiently foresighted development (e.g., Lake Hayes). In such cases, outright protection of water bodies needs to be possible on both environmental and economic grounds.
4. Criteria that are used for determining permitted development are consistent with national emissions reduction goals and using gross, not net, criteria in line with the Climate Change Commission's most recent recommendation. With regard to landuse, there are clear synergies between deintensification for water quality outcomes and reducing GHG emissions.
5. Requiring a reduction in exogenous nutrients (including from stock) as a way to shift agricultural practice to more biological methods that support community resilience (carbon sequestration, water infiltration, soil water holding capacity, groundwater recharge, moderated flooding, enhanced natural fertility etc) and reduced pollution. We have farmed in the past without synthetic inputs and can do so again.
6. Adopting a planning process of optimizing climate adaptation, its mitigation and general resilience at a catchment scale.
7. To this end, ensure that policies are clearly given effect in the Methods for local authorities, including a requirement for community-based strategies to maximise

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ecosystem and natural resource resilience and landscape function.

Scope for more water and climate-smart management of soils

8. Nitrogen cycling in nature is almost 100% biological. The nitrogen cycle and carbon cycle are intrinsically linked meaning management of nitrogen contributes to climate goals.
9. Addition of excess synthetic nitrogen to soils circumvents the genetic capability present within the soil microbiome to deliver nitrogen from the atmosphere, can cause slow acidification and degradation of soil and can result in soil carbon losses, specifically in areas of intensification beyond carry capacity.
10. As we transition our current food production systems to be more sustainable and regenerative, reduction or removal of nitrogen inputs decreases the use of natural gas required for the manufacture of fertilisers (Dawson and Hilton, 2011; Menegat et al., 2022), decreases fossil fuel use through lower transport requirements and on-farm diesel use to incorporate fertilisers, protection of waterways from nutrient runoff through misuse of fertilisers (reviewed in Wang and Li, 2019) and protect climate systems from powerful greenhouse gases such as nitrous oxide derived from the breakdown of fertilisers (Mosier et al. 1998; Forster et al., 2007; Ravishankara et al., 2009; Su et al., 2011).
11. In pastoral systems incorporation of more plant diversity allows for better delivery of food sources for animals and microbial life in soils. This results in increased performance of animals (by addresses subclinical nutritional deficiencies, pers. comm., Emily House, 5th Business Agri.) and delivers a higher level of functionality and resilience of agro-ecosystems. This has been evidenced in long term trials such as the Jena project (Germany), Rothamstead (UK) and Rodale Institute (USA). There are increasing numbers of local New Zealand examples where changes in management practices in pastoral and arable operations are delivering more functional agro-ecosystems without economic losses. This is primarily due to increases in soil organic matter and more efficient turnover and utilisation of resources resulting from improved soil structure, water flow and storage and gas exchange that allows a higher diversity of function to be delivered by the soil microbiome.
12. Deintensification does not equate to loss of economic viability, especially if marginal return models are used in the first instance i.e., minimising or removing any activities on-farm that result in expenditure. Expenditures include things like feed requirements, veterinary services and agrichemical inputs. More production does not necessarily equate to quality production if animals are not performing optimally and soil biology is not delivering adequate ecosystem support services to the production system. There are nature-based solutions that can supplant agrichemical interventions.
13. Deintensification delivers immediate gains with respect to climate targets as lower stocking rates immediately result in lower methane emissions both from the animals and the soil.

14. Land use suitability analysis at catchment scale would be a reasonable path forward to achieve gains in agroecosystem health and surface and groundwater health. Landuse suitability assesses soil types, fertility, maximal use of geographical features such as sun aspect and hydrological flows, identifies sensitive areas where changes in management is required and identifies areas where maintenance of intensive activities is sustainable. The technology and capability to achieve this is available in New Zealand with the best example implemented to date being the Taupo area and upper Waikato catchment.

Updated position on specific submission points

15. Refer to the table of policies below. Columns 1 to 4 are our original submission. Column 5 and 6 (shaded) are respectively the comment in the s42A report pertaining to that submission point and column 6 is our response – with any updated decision request. In some cases, we propose revised wording that we hope is a resolution.

Our expectation of this pRPS

16. Something that weighs on a Society with limited resources is the question as to whether we will have to appeal this pRPS and present evidence of our environmental predicament, for it to contain policy that is fit for the level of risk we face.
17. We have submitted that this RPS must now firmly drive down emissions and change behaviour. The ORC has indicated to us in the s42A report that some submission points would be better suited to the LWRP. The LWRP has to give effect to the RPS. And while an RPS is less specific than what would be found in a plan, there is nothing to stop an RPS being quite explicit. Thus, if it can be so, plans would struggle to deviate. This is exactly what is now needed.
18. And while we accept an RPS is not where you would usually set specific things for specific places, it can be where you put a methodology that must be used by a L&W Plan (Hamish Rennie per com).
19. We understand that the Commissioners can develop their own policy wording provided it is justified on the material before them and as long as it has been referenced in the submission and does not come as a surprise to other participants. (Hamish Rennie, per com).
20. Our submission has been presented with the support of specialists in the fields of RMA planning, risk management, energy and engineering, land and soil and hydrology. We consider the Commissioners can and should exercise full discretion in this pRPS, given the rapidly shrinking window for meaningful response.

Summary policy frame

21. We envisage the policies we have submitted working together (including the Freshwater Instruments) as follows:
- i. Visions that are founded in ecological imperatives and cultural authority that embed a philosophy of ecological gain for all land rather than minimum damage.
 - ii. Firm policy embedding a progressive reduction in supplementary nutrient inputs to land.
 - iii. This incentivises and hastens a shift to biological landuse practice which builds soil organic matter and replaces exogenous inputs with endogenous processes (mixed cropping, sward diversity, grazing management etc).
 - iv. Enhanced organic matter drives improvements in soil condition, GHG emissions, enhanced carbon and water storage, and water quality.
 - v. Other policy controlling the use of other hazardous substances to further reduce risk to water quality
 - vi. The NPSFM requires integrated landscape management to realise its goals.
 - vii. Specific policy requires local bodies to facilitate development of what are effectively catchment resilience plans, based on managing natural and physical resources to optimise landscape function.
 - viii. Overall, the Wise Response approach promotes restoring ecosystem dynamics rather than focusing on managing individual domains.

Final comment

22. When failure is not an option, then the only rational response is to show moral leadership, get out in front and benefit from timely transition.
23. Accordingly, our Society wishes this RPS for Otago to send a message to the rest of NZ that we are not prepared to sit quietly and watch events taken out of our hands. The message of unequivocal policy will be that we want national level policy to follow suit asap. Indeed, given the constraints inherent our political system, our Mana Whenua partners may offer most hope in this regard.
24. “Of one thing we can be sure: if we fail to act, nature will do so with the rough justice she has always served on those who are too many and who take too much”.

Thank you for the opportunity to be heard.

Table with updated decisions requested following the s42A report

1. Specific Provision	2. Support / Oppose/ Amend	3. Reasons	4. Decision requested	5. ORC S42 Response to Wise Response	6. Society Responses to s42 and updated decision requested
Overall proposal	New Policy	To meet Te Mana o Te Wai	In order to meet Te Mana o Te Wai, improve (i.e., potentially better than national policy) all water bodies rather than just the significant and focus on rebuilding biophysical capacity and ecosystem function rather than “outstanding” water bodies and the “values” that we decide are important	S42a at 61 “I consider that the provisions of the LF chapter include direction on ecological health, as well as the wider health and well-being of water bodies and freshwater ecosystems. In addition, there is specific direction on the management of outstanding water bodies and their significant values in the NPSFM which the pORPS must give effect to. I do not recommend accepting the submission point by Wise Response”	ORC does not address our proposal to protect and enhance all water bodies. In theory, if the values are to be protected then the whole ecosystem is protected to the extent it affects or produces those values – this is the “beauty” of the RMA as it also allows for those aspects that are not functionally important to maintaining the values to not need to be protected and uses that do not affect the values are acceptable – so not ‘locking up’ ecosystems. The issue becomes how much margin for error is allowed to ensure resilience in the face fo significant change (Hamish Rennie).

<p>Overall proposal in submission</p>	<p>New Policy</p>	<p>To meet Te Mana o Te Wai.</p>	<p>The formal adoption of an Integrated Landscape Management (ILM) approach (ie whole-of-catchment in the NPSFM) that includes treating catchments as water retention vessels, (whose nutrient and water holding capacity can be enhanced) rather than a drainage areas with largely fixed hydrological characteristics.</p>	<p>S42a at 62 "I am unsure what an Integrated Landscape Management approach is or what amendments would be required to the LF chapter to implement such an approach. Without further evidence, I do not recommend accepting the submission point by Wise Response"</p>	<p>A rhetorical question for the ORC is they may not completely understand what ILM is but how completely clear do they feel about what te mana o te wai or orange taiao mean? (https://waateanews.com/2022/11/16/maori-concept-misused-to-attack-taiao/). ILM is simply a more explicit expression of integrated management of natural and physical resources that is already required in the RMA - one that has been in the shadow for far too long. Integrated landscape planning incorporates all voices, including those of the public, private, and civic sectors, and serves as the fundamental starting point for building resilient communities and ecosystems. Place-based landscape planning will be key for resilience of local populations to endure and overcome social, economic, and environmental shocks and stresses. Thus, landscapes are utilized as the basic building blocks for the development of socio-ecological resilience. If the ILM concept can be referenced in the RPS, then an established methodology will speed progress and harmonise its implementation.</p> <p>The Regional Council, with its responsibility across all aspects of resource management, is the ideal body to facilitate an ILM approach. And the RPS is the logical level for its adoption, as it can then be expressed consistently in all subordinate plans.</p> <p>Taking into account the s42A response, we suggest defining the term in the RPS and referring to it as a guide in the methodology.</p>
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Proposed Method Provision	New provision		<p>The only way that communities will maximise resilience to climate change, biodiversity loss and other economic and public health risks will be to plan collectively for the sustainable management and use of natural and physical resources. This is where the policies in this RPS can be integrated into a coherent strategy. Existing catchment groups or a bespoke structure like the Zone Committees might provide the vehicle.</p>	<p>We would like to propose that essence of Method 9.2.3 in the operative RPS is adopted in this new RPS. ie <u>Regional, city and district councils may will facilitate community-based development of strategies and plans to maximise community, ecosystem and natural resource resilience at landscape or catchment level, guided by an Integrated Landscape Management methodology.</u></p>
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	<p>Proposed definition to clarify s42A comment</p>				<p><u>ILM definition: as its as much a process as a particular outcome, we propose this definition: "ILM is an optimisation process and approach to landscape management that seeks to simultaneously, enhance life and well-being, strengthen agricultural systems, conserve biodiversity and secure ecosystem health which includes the following five elements:1. Shared or agreed management objectives that encompass multiple benefits from the landscape2. Field, farm and forest practices are designed to contribute to multiple objectives, including human well-being, food and fiber production, climate change mitigation, and conservation of biodiversity and ecosystem services3. Ecological, social, and economic interactions among different parts of the landscape are managed to realize positive synergies among interests and actors or to mitigate negative trade-offs4. Collaborative, community-engaged processes for dialogue, planning, negotiating and monitoring decisions are in place5. Markets and public policies are shaped to achieve the diverse set of landscape objectives and institutional requirements.</u>Based on: https://www.un.org/esa/ffd/wp-content/uploads/sites/2/2015/10/IntegratedLandscapeManagementforPolicymakers_Brief_Final_Oct24_2013_smallfile.pdf</p>
<p>Land and Freshwater</p>					

<p>LF New Policy to minimise the use of polluting side effects of potentially hazardous substances.</p>	<p>New Policy</p>	<p>People in the region need to minimise pollution of land, water and air. It must be demonstrated to the ORCs satisfaction that there are no other effective alternatives available that would minimise or avoid the need to use hazardous chemical substances.</p>	<p>Insert new Policy: <u>Regional and district plans are to require the use of potentially harmful and polluting chemical substances to be fully justified and if use is approved, the use and impact be monitored and reported.</u></p>	<p>Does not appear to be a direct response to this proposal</p>	<p>Huge quantities of potentially hazardous chemical are used with little or no control and we are still understanding the adverse effects on the natural environment. Tighter regulations are needed to minimise this risk. If the principle is established in the RPS then the means by which this can be achieved can be proposed in the appropriate regional plan.</p>
<p>LF–WAI–P3 – Integrated management /ki uta ki tai</p>	<p>Support</p>	<p>For the avoidance of doubt.</p>	<p>Manage the use of fresh water and land in accordance with tikaka and kawa, using an integrated approach that, <u>in addition to meeting the Integrated Management (IM section) provisions:</u> (1) recognises and</p>	<p>I agree that this policy does apply alongside the IM chapter, however consider that is the case for all provisions of the pORPS. This is set out specifically in IM-P1 therefore I do not consider any amendments are necessary.</p>	<p>The important point is that there is not confusion between two policies. What is the justification for having this integrated management policy separate from that section?</p>

			sustains the connections and interactions between water bodies (large and small, surface and ground, fresh and coastal, permanently flowing, intermittent and ephemeral),		
Freshwater Visions of the FMU					
LF-VM – Visions and management	Amend	For the avoidance of doubt.	Immediately after Objectives on page 124 insert <u>These FMU and Rohe visions are in addition to meeting all other provisions in this statement and cannot be weaker than a national standard or provision</u>	This submission point is acknowledged at s42A 327 but is not specifically assessed. There is a discussion in the analysis about the risk of having multiple levels of visions.	We consider that building a plan around community "visions" is fundamentally flawed as the may be totally out of touch with pressing environmental imperitives. One would hope that Te Mana o te Wai and Orange Taiao applied with understanding might temper the worst exigencies. Given the settings in the NPSFM there may be little the Commissioners can do about this. At the very least, we wish to to see it clear that national standards set a baseline for local standards, if not here, elsewhere in the RPS.
LF-FW – Fresh water Objectives LF-FW-O8 – Fresh water (Clause 5 only plus we mght reference the two new policies we	Amend	To clarify and extend Objectives to other important processes	In Otago’s water bodies and their catchments:		

<p>proposed altho they are marked as Freshwater Instruments)</p>					
			<p>(5) — the significant and outstanding values of Otago’s outstanding water bodies are identified, <u>restored where degraded</u> and protected.</p>	<p>ORC: “I acknowledge that some water bodies may have had outstanding values in the past that have been degraded. In my opinion, an assessment of whether values are “outstanding” or not can only be based on whether those values are still outstanding at the time of assessment. While some values may be outstanding but also have been degraded in some way, I do not consider that it is necessary to restore those values. “Outstanding” is a very high threshold and restoration is unlikely to be a wise investment of resources. For these reasons, I do not recommend accepting the submission point by Wise Response”.</p>	<p>We are talking about restoring the significant and outstanding values not a pristine condition. That assertion that outstanding can only be judged at the time of the assessment – not what it was at some time in the past - is a recipe for degradation every time there is a reassessment and makes no ecological sense. Lake Hayes for example has been internationally famous but is now highly eutrophic, at times repulsive for contact recreation and a regional shame. It needs to be restored in his iconic setting. We reaffirm our original submission but with the following modifications to the policy proposal: (5) the significant and outstanding values of Otago’s outstanding water bodies are identified and protected, and where cumulative effects were underestimated, a programme with milestones is established to rectify them.</p>

			<u>(6) — all land is assessed, managed and supported as “whole systems” to promote overall resilience, biophysical capacity and collective wellbeing</u>	I do not consider that either of the new clauses sought by Wise Response are necessary. Integrated management is addressed through LF-WAI-P3, LF-VM-O7, and LF-LS-P16. Management of land and soil is addressed through the provisions of the LF-LS section. I do not recommend accepting this submission point.	Marked as a Freshwater Instrument in s42A (at 863 and 885)
			<u>(7) — soils and cover are managed to maximise the natural capture, retention and infiltration of rainfall within the land and minimise the need for fertilizer.</u>		Marked as a Freshwater Instrument in s42A (at 863 and 885)
Freshwater Policies					
LF-FW-P12 – Protecting outstanding water bodies	Amend	Adding the need to enhance were certain values or attributes have been degraded even though overall, the body is still outstanding.	The significant and outstanding values of outstanding water bodies are: (1) identified in the relevant regional and district plans, and (2) protected by avoiding adverse effects on those values. (3) <u>restoring to high quality and protecting where that</u>	ORC “ ... while some significant or outstanding values may have been degraded in some way, I do not consider that it is necessary to restore those values. “Outstanding” is a very high threshold and restoration is unlikely to be a wise investment of resources. For these reasons, I do not recommend accepting the	We are talking about restoring the significant and outstanding values not a pristine condition. That assertion that outstanding can only be judged at the time of the assessment – not what it was at some time in the past - is a recipe for degradation every time there is a reassessment. We disagree with the assessment that it would be unlikely to be a wise investment of resources Take Lake Hayes for example has been internationally famous but is now highly eutrophic, at times repulsive for contact recreation and a blatant resource management failure and a national disgrace. It needs to be restored in his otherwise iconic setting.

			has been lost due to <u>inappropriate development</u>	submission point by Wise Response”.	
					Understand how they make that determination.
					See Para 721 and APP1 in s42A regarding the determination of what is outstanding (some disagreement on this between submitters)
					See also 733 -.
LF-FW-P13 – Preserving natural character		Functional need is a relative term and requires judgement depending on a range of factors	Preserve the natural character of lakes and rivers and their beds and margins by: (1) avoiding the loss of values or extent of a river, unless: (a) there <u>is a functional need has been demonstrated to the satisfaction of the ORC for the that</u> activity in that location, and ...	I do not consider that the amendments sought by COES, Lynne Stewart, or Wise Response improve the clarity of the provision. “Functional need” is a defined term and councils will need to assess, in each case, whether the clause applies to an activity. I do not recommend accepting these submission points.	Functional need is defined in the pRPS as "means the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment". It is seldom that there is only one option possible in a technical sense. Typically, cost is the major determinant. Therefore, this needs to to be clearly linked to assessment criteria to take into account the other values. Halting climate change and resilience in a changing operating environment have to be a primary consideration in any such assessment.

<p>(And now P13A) Effects management hierarchy</p>		<p>New proposal - no original submission made</p>		<p>The distinction between protecting, enhancing and restoring ecosystems, and the application of the mitigation hierarchy, maintains the existing trading-off and bottom-line mind set. Ultimately, even if compensation were possible, if an environment is sufficiently important/rare, the proposed activity can be prohibited in its own right. That requires the right criteria to be considered and the proposal needs to contribute to achieving a low carbon economy. To anchor LF-FW-P13A we therefore propose the following modification for LF-FW-P9(1)(b)(ii) "the specified infrastructure will provide significant national or regional benefits <u>consistent with achieving the required national emissions reduction pathway" (or a clause to that effect located elsewhere in the pRPS).</u> Another key issue is how they define what is practicable – is it defined monetarily – eg the need to protect ‘stranded assets’ (irrigation systems) means it is not practicable to reduce the level of water take should be easily seen as a bogus argument. In any event we don’t consider irrigation infrastructure as a stranded asset – it is instead a re-deployable asset e.g., this infrastructure can be used to ensure reliable harvest of another enterprise. So in P13A we wish to see the word "technically" inserted:</p> <p>(1) adverse effects are avoided where <u>technically practicable,</u> (2) where adverse effects cannot be avoided, they are minimised where <u>technically practicable,</u> (3) where adverse effects cannot be minimised, they are remedied where <u>technically practicable,</u></p>
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<p>LF-FW-P14 – Restoring capacity and natural character</p>	<p>Amend</p>	<p>More direction, enhance capacity (resilience) and natural variability where it has been lost as a means to restore form, rebuilding the quality of amenity and life supporting qualities in line with national provisions.</p>	<p>LF-FW-P14 – Restoring <u>capacity and</u> natural character: Where the natural character of lakes and rivers and their margins has been reduced or lost, <u>require promote</u> actions that: (1) restore a form, <u>biophysical capacity, variability</u> and function that reflect the natural behaviours of the water body,</p>	<p>The effects management hierarchy (in relation to natural wetlands and rivers) referred to in LF-FW-P9</p>	<p>We acknowledge the difficulties that ORC has identified with these submission points and propose an alternative LF-FW-P14 – Restoring natural character: Where the natural character of lakes and rivers and their margins has been reduced or lost, <u>require promote</u> actions that: (1) <u>establish a restoration pathway with timelines toward a form and function that can best</u> reflect the natural behaviours of the water body,</p>
			<p>(2) improve water quality or quantity where it is degraded <u>or excessively allocated until it is safe and attractive for recreation and suitable for sourcing Mahinga Kai,</u></p>	<p>and LF-FW-P13 is the approach to managing adverse effects of activities that requires that:</p>	
			<p>(3) increase the presence, resilience and abundance of indigenous flora and fauna, including by</p>	<p>(1) adverse effects are avoided where practicable,</p>	

			providing for fish passage within river systems,		
			(4) improve water body margins by naturalising bank contours and <u>re</u> -establishing indigenous vegetation and habitat, and	(2) where adverse effects cannot be avoided, they are minimised where practicable,	
			(5) restore water pathways and <u>the</u> natural connectivity <u>within and</u> between water systems.	(3) where adverse effects cannot be minimised, they are remedied where practicable,	Accept ORC policy proposal
Freshwater Methods					
Facilitate the repopulation of rural land and rural communities	New policy		Policy required to promote interest and opportunities for young people to be able to take up farming by investigating land occupancy schemes.	S42 response not identified.	This flows from the need to be more resilient to climate change and other growing social stresses most notably with food supply. The most logical location to incorporate a clause would appear to either be in IMP10 " (3) provide Otago's communities, including Kāi Tahu, with the best chance to thrive, even under the most extreme climate change scenarios, <u>taking into account the most resilient population distribution in the region and</u>" or words that promote similar action in a method that supports the policy.
Composition of FMUs	New policy		FMUs must be fully representative of the community at large, not just consumptive	S42 response not identified.	Presumably a Freshwater Instrument matter.

			water users and hydrogenerators.		
Land and Soil					
LF-LS – Land and soil					
Objectives					
LF-LS-011 – Land and soil	Amend	Soil water-holding capacity can change under different management regimes. Building such capacity goes hand in hand with building biophysical capacity and is going to become increasingly important with Climate change it should be specifically mentioned.	The life-supporting <u>and water-holding</u> capacity of Otago’s soil resources <u>are</u> is <u>safeguarded and enhanced</u> , and the availability and productive capacity of highly productive land for primary production is maintained now and for future generations.	The inclusion of “enhancing” alongside “safeguarding” life supporting capacity of soil resources as sought by Wise Response would add complexity to the provision. It is not clear in what circumstances enhancing is required, or how it is undertaken. This would need to be set out in accompanying policy direction. The submitter does not elaborate on when enhancing would be required in addition to safeguarding, nor is this change reflected in their relief sought on other LF-LS provisions. I recommend rejecting the submission point of Wise Response (???).	Safeguarding is securing a baseline from which you can then look to enhance. There seems to be confusion between what is covered by the terms like "lifesupporting", "Quality", "productive capacity" and "soil health or fertility" in this and the next objective. Is the proposed change to P20 enough for WHC? Building WHC is part of building resilience to drought on farm as well as freshwater outcomes for the catchment. Including improved WHC is intended to move farmers toward managing soils as living systems and to drive soil and environmental gains - not just preserving the current or natural capacity irrespective of its state.

				<p>I do not consider it is necessary to include water-holding capacity in the objective as water-holding capacity is captured by the term life-supporting capacity. Soil's ability to hold water is a contributing factor to its health and productivity, and I consider that it does not require specific reference. I recommend rejecting the submission point of Wise Response.</p>	<p>You can have "life supporting" soils without high water holding capacity.</p>
Now LF-LS-011A Highly productive land					<p>Highly productive land is only part of the landscape. Its important that the area of versatile soils is not lost but the productive capacity of land is cocered by obective one.</p>
					<p>Seems a sensible step but the more important question is are the proposed criteria for selection (LF-LS-P19) appropriate and complete (for instance what does "large and geographically cohesive mean?) remembering that highly productive is dynamic and a function of management and technology.</p>
					<p>We also have a problem with the emphasis on "productivity" rather than its effective role in the hydrological and nutrient cycle regimes. We have a similar problem with relating effects to "values" rather than ecological health.</p>

<p>LF-LS-012 – Use of land</p>	<p>Amend</p>	<p>As above. Needs to have more teeth and explanation.</p>	<p>The use of land in Otago maintains soil quality and contributes to achieving environmental outcomes for fresh water <u>quantity, with a focus on building biophysical capacity to maximise carbon sequestration, reduce vulnerability to drought and erosion, augment groundwater recharge and river flow and minimise the need for nutrient supplements.</u></p>	<p>I consider that the level of detail sought by Wise Response is not appropriate for an objective just is outcome-focused. In addition, the concept of soil quality is considered to capture many of the listed matters, and they do therefore not require specific reference. I recommend rejecting this submission point as it relates to LF-LS-O12, but consider that the focus on biophysical capacity may be able to be captured by other provisions, including LF-LS-P17 and LF-LS-P20.</p>	<p>The heading should revert to "Use of Land" as the use of land needs to contribute to aspects other than just freshwater - eg climate mitigation, amenity, biodiversity etc. On the other hand, we accept the ORC rebuttal of the changes proposed for the objective itself, but it means that it is important that the equivalent ideas proposed for LF-LS-P20 - Landuse change - are accepted.</p>
<p>LF-LS-P20 – Land use change</p>	<p>Amend</p>	<p>Expressing objective LF-LS-O12</p>	<p><u>Actively promote changes in land use or land management practices using an Integrated Landscape Management approach</u> that improve:</p>		<p>Would need to define ILM. Also see note in O11 re WHC</p>

			<p>(1) the sustainability and efficiency of water use <u>at catchment scale</u>,</p> <p>(2) resilience to the impacts of climate change, or</p> <p>and (3) the health, biophysical capacity and quality of soil.</p>	<p>In response to submitters seeking that clause (1) apply at a catchment scale, it is not clear how this would be determined, and how it would relate to property level land use change. Without further information supporting this request, I recommend rejecting the submission point</p>	<p>The ORC may not know how a submission point is going to be measured (s42A at 1542) but that should not prevent a worthy policy being set. The insertion of hydrological properties, soil retention and climate mitigation are from policies in the operative RPS (respectively Policies 3.1.4, 3.1.8 and 4.2.2). Modified policy recommendation: "<u>Actively promote fully-integrated changes in land use or land management practices that support and improve: (1) the sustainability and efficiency of water use at catchment scale, (2) the properties of land and soil to capture, infiltrate and store moisture (3) mitigation of and resilience to the impacts of climate change, or (34) the retention, health and quality of soil, or and (45) achievement of water quality standards</u>".</p>
Now LF-LS-M11A					<p>Seems a sensible step but the more important question is are the proposed criteria for selection (LF-LS-P19) appropriate and complete (for instance what does "large and geographically cohesive mean?)" remembering that highly productive is dynamic and a function of management and technology.</p>
			<p>(3) <u>implementation of policies LF-LS-P16 to LF-LS-P22.</u></p>		
LF-LS-M12 – District plans	Amend	Active promotion of land management that reduces the need for artificial inputs and are consistent with	Territorial authorities must prepare or amend and maintain their district plans no later than 31 December 2026 to:		

		national zero carbon goals.			
			(1) manage land use change by:		
			(a) controlling the establishment of new or any spatial extension of existing plantation forestry activities where necessary to give effect to an objective developed under the NPSFM, and		
			(b) <u>prohibiting</u> minimising the removal of tall tussock grasslands, and		Sir Alan Mark an alpine ecologist advises that the area of tall tussock grassland has recovered somewhat from the fires of the Maori, but his is no longer relevant to the protection needed now of this species from farming practice. Its hydrological roll must be protected (per comm). We therefore confirm our original submission with an update "(b) <u>minimising avoiding</u> the removal of Montane tall tussock grasslands, to recognise their ability to capture, and hold and release precipitation"

			(2) provide for and <u>promote encourage</u> the creation and enhancement of vegetated riparian margins and constructed wetlands, and maintain these where they already exist, and	I recommend accepting this submission point.	Accept ORC policy proposal
			(4) <u>actively promote changes in land use that improve the sustainable and effective use of fresh water, reduce the need for chemical inputs and that are consistent with national net zero carbon goals and</u>	I consider that this is already captured by LF-LS-M11(2) and is a function of regional councils rather than district councils. For similar reasons, I consider that the extent to which district plans will be able to implement policies LF-LS-P16 to LF-LS-P22 is limited.	It is not just the ORC that have these responsibilities. Under RMA s31 the district councils are required to "achieve integrated management of the use, development or protection of land and associated natural and physical resources" in their district. We therefore reconfirm our original submission point.
			(5) <u>implementation of policies LF-LS-P16 to LF-LF-P22.</u>		As above We therefore reconfirm our original submission point.
LF-LS-M13 – Management of beds and riparian margins	Amend	Various suggestions to improve clarity	Local authorities must prepare or amend and maintain their regional and district plans to manage the condition of the bed and banks of water bodies, riparian		

			margins and associated lands, including vegetative cover, to:		
			(1) maintain <u>and enhance</u> existing biodiversity <u>and its values with enhanced habitat,</u>	I recommend accepting in part the amendments sought by Wise Response to clause (1). I agree that enhancement may be an appropriate action, however do not consider that enhancement is required in every case. I recommend adopting the wording “maintain or enhance” for this reason. I consider the remainder of the amendments sought to this clause introduce uncertainty and recommend rejecting them.	As soon "or" is incorporated in the method the question then becomes "when". We also do not agree that maintain alone is sufficient where it is degraded. We thus reconfirm these intentions in our original submission but propose that the wording be revised (1) maintain <u>and enhance</u> existing biodiversity <u>and habitat</u> and associated values <u>unless an exemption for enhancement is granted</u> , In other words enhancing (ie environmental gain) is the norm.
			(2) increase the presence, resilience and abundance of indigenous flora and fauna, particularly taoka species, including by providing for <u>associated wetlands and</u>	Wise Response seeks to include reference to “associated wetlands and backwaters” in clause (2) as well as a reference to maintaining water quality. I am unsure what the submitter intends by “providing for associated	We acknowledge the adoption of wetlands. In some river systems (eg braided) it is the habitats supported by backwaters and/or marginal braids that provide a depth and resilience for aquatic and non-aquatic fauna and flora. They can also provide a water quality buffer to the main stem. We believe these are a sufficiently different geomorphic element to identify in addition to "wetlands". While the ORC accepts in

		<p><u>backwaters,</u> biodiversity corridors within river systems, and requiring riparian buffers that are sufficient to maintain indigenous biodiversity <u>and water quality,</u></p>	<p>wetlands and backwaters” and note that the term ‘backwaters’ is not used in the RMA or the pORPS. In my opinion, wetlands can be important parts of river systems so I consider it would be appropriate to include reference to them in this part of the clause. I agree that the actions in clause (2) will contribute to maintaining water quality and therefore recommend this submission point is accepted in part.</p>	<p>part the suggestion that "water quality" be included it has not been included in the policy.</p>
		<p>(3) support improvement in the <u>ecological and hydrological</u> functioning of catchment processes where these have been adversely affected by changes in margins and connected lands over time, and</p>		<p>We accept the ORC proposal</p>

(4) ~~reduce~~
control unnatural
sedimentation of
water bodies to meet
ecological standards.

It is not clear what Wise Response is referring to by "ecological standards", which they seek to include in clause (4). I consider that replacing "reduce" with "control" would weaken the provision. For these reasons, I recommend rejecting the submission point

"Reduce" alone is weak enough to be meaningless. At the very least plans must include reference to national standards and include a timeframe. **Proposed revision: "(4) reduce unnatural sedimentation of water bodies to achieve or better national standards by 2030"**.