

From: [Andrew Ridden-Harper](#)
To: [Mailroom Mailbox](#)
Subject: Plan Change 7 to the LWRP Submission
Date: Friday, 13 September 2019 2:55:42 PM

Re: Plan Change 7 to the LWRP Submission

I am deeply concerned with the current state of freshwater management in Canterbury and have become increasingly disturbed by the ongoing reports of increasing nitrate and nutrient discharge pollution in rivers and other freshwater bodies. This pollution has already caused considerable damage to sensitive fresh water-based ecosystems, and will likely pose a serious public health risk by contaminating drinking water, if allowed to continue unchecked. Having such polluted freshwater is completely at odds with the global perception that New Zealand is 'clean and green'. This perception has produced significant economic benefits, particularly to agricultural exporters, and businesses relating to tourism. However, these commercial sectors will not continue to enjoy those benefits if New Zealand's 'clean and green' reputation is tarnished, as it likely soon will be, unless significant action is taken to address the worsening freshwater pollution (e.g. Mike Joy and David Larsen, "The Incontinent Cows of Middle-earth", New York Times, 15 August 2019).

I will now detail the specific points of my submission. Pertaining to Section 14 (Orari, Temuka, Opihi, Pareora) and Section 08 (Waimakariri):

I am strongly in favour of caps on any new water allocation.

I am strongly in favour of setting nitrate limits for rivers and groundwater and strongly support the policies and rules that restrict any further increase of nutrient discharges.

I strongly support higher required reductions in nitrogen losses in High Nitrogen Concentration Areas beyond "Good management practice" and want to see greater reductions required in the life of this current plan.

I believe that all minimum flows and associated partial restrictions should provide for the ecological health of the stream, river, lagoon, etc. within the life of this current plan.

Additionally pertaining more specifically to Section 08 (Waimakariri):

I believe that the nitrate leaching in the Waimakariri 'Nitrate priority area', which is modelled to result in a nitrate level of 3.8 mg/l, poses an unacceptable risk to the drinking water of Christchurch.

I consider that the implication for future nitrate pollution of Christchurch's drinking water is inconsistent with the following Strategic Policies in the Land and Water Regional Plan:

4.4 "Groundwater is managed so that: ...Overall water quality in aquifers does not decline"

4.5 "Water is managed through the setting of limits to safeguard the life-supporting

capacity of ecosystems, support customary uses, and provide for community drinking-water supplies and stock water, as a first priority...”.

I strongly believe that the nitrate reduction rules should require appropriate reductions in the ‘Nitrate priority area’ which will maintain or improve the current quality of the Christchurch drinking water aquifers as is required under the NPS for Freshwater. I believe that a broad perspective should be taken when assessing the economic impact of implementing lower nitrate limits. For example, it would be a significant financial burden if, in the future, Christchurch residents need to treat their drinking water or source alternative supplies. Without action, the future cost to the Christchurch public, and New Zealand as a whole, is likely to vastly exceed that of any short term economic impact on farm profits.

I strongly support a science-based precautionary approach to both the protection of human health and the protection of Christchurch’s drinking water sources, which rely on functional, healthy aquifer ecosystems. Graham Fenwick (NZ’s leading groundwater ecosystem scientist) suggests in his evidence to the Te Waikoropupu springs WCO hearing that a trigger value of 0.4 - 0.5 mg/l is a precautionary value to ensure ecosystem health.

Chris Hickey (NZ’s leading ecotoxicologist) recommends in his evidence to the Te Waikoropupu springs WCO hearing that where long lag times apply, a management limit of 0.55–1.1 mg/l is appropriate (Hickey considers a ‘long time lag’ to be 8 years, whereas in the lag effects for the Waimakariri ‘Nitrate priority area’ is modelled as being at least 50 years).

Therefore, I request setting a limit of 0.5 mg/l to be consistent with those suggested as part of the Te Waikoropupu springs WCO hearing (above).

In Graham Fenwick’s presentation to commissioners on behalf of Wellington Regional Council in 2018 he states: “Available research evidence empirically demonstrates that this standard [NZ Drinking Water Standard], designed to protect human health, is inappropriate for ensuring the health of aquatic ecosystems and invertebrates under long-term exposure.”

In light of Fenwick’s and Hickey’s findings mentioned above, it is clear that further to being inconsistent with policies 4.4 and 4.5, the proposed nitrate limit of 3.8 mg/l will not provide for the ecosystem health of the Christchurch drinking water aquifers.

The New Zealand Conservation Act 1987 and the New Zealand Biodiversity Strategy requires regional councils to ensure that the intrinsic and other values of all biodiversity (including that of “underground aquifers”) are adequately maintained and safeguarded for future generations, so I believe that a nitrate limit that is lower than 3.8 mg/l (e.g. 0.5 mg/l) should be set.

Given that the aquifer ecosystem plays a critical role in providing Christchurch’s drinking water, I believe that it requires specific protection, greater than that is afforded in the current plan’s rules for nitrate reductions.

Furthermore, I do not believe that because the modelled nitrate pollution suggests that serious public health risk is at least 50 years away, that it is of any less immediate concern (particularly because ECan's monitoring shows the northern bores are already showing increasing nitrate levels - in line with the model's predictions) because I believe that it is morally wrong to knowingly create the significant problem of drinking water contamination for future residents of Christchurch.

Pertaining to the Omnibus section:

I strongly support the rules applying to:

Greater restrictions on activities to improve protection of the remaining habitat of native freshwater fish; Additional stock exclusion provisions for swimming sites; Greater recognition of values (such as mahinga kai) and protection of sites of significance to Ngai Tahu, including wahi tapu (sacred sites), wahi taonga (treasured sites), tuhituhi o nehera (limestone rock art sites) and waipuna (springs), and; The addition of new salmon spawning sites.

I could not gain an advantage in trade competition through this submission.

I do not wish to speak to my submission in a public hearing.

Thank you for considering my submission.

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