

From: [Aotearoa Water Action AWA](#)
To: [Mailroom Mailbox](#)
Subject: Plan Change 7 to the LWRP Submission
Date: Friday, 13 September 2019 3:27:03 PM
Attachments: [AWA Submission on PC7.pdf](#)

Good Afternoon

Attached is the Aotearoa Water Action submission on Plan Change 7 to the Land and Water Regional Plan

Regards
Peter Richardson
(Co-convenor, Aotearoa Water Action)

AWA supports the human right to safe, healthy and affordable drinking water. It also supports the maintenance and restoration of aquatic ecosystems (rivers, streams, aquifers) as a source of health and well-being for communities and for the life of the planet.

AWA believes the proposed rules in PC7 providing for nutrient reduction in the Nitrate Priority Area are insufficient to safeguard the health of the Christchurch community, or the ecosystems which depend on our waterways and aquifers. The proposed rules continue to prioritise economic interests ahead of community and environmental interests. They also fail to adopt necessary precautionary principles having regard to the significant uncertainty around the level of inevitable increases in nitrate levels as a result of historic dairy expansion and intensification.

The adoption of a 3.8mg/L nitrate/nitrogen target for the deep Christchurch aquifer is dangerously high, particularly given the results of the recent Danish study showing increases in colo-rectal cancer at nitrate/nitrogen levels above 0.8mg/L.

Target levels for all receptors (including the Christchurch aquifer) are set far too high given that best scientific evidence (Fenwickⁱ, Hickeyⁱⁱ) supports a level of no more than 1.1mg/L nitrate/nitrogen to ensure maintenance of aquifer ecosystem health. At levels well below Council's target level therefore, aquifer ecosystem health and the health of those of us who use the aquifer as a source of drinking water, is likely to be damaged.

It is noted that 'the decision to use 3.8mg/L was based on consideration by the Christchurch West Melton and Waimakariri Zone Committees of the environmental benefits and economic impacts of a range of possible indicative nitrate concentration targets.' AWA submits that the risks to the health of New Zealand's second largest city must be given a much higher priority than short-term economic benefits. Where a reputable scientific study strongly indicates that the target level poses a significant risk to community health, then that target cannot properly inform decisions on necessary nitrogen levels. Any economic assessment must also consider the likely cost to the region and to the country in increased health and social costs arising from increases in the incidence of cancers and other conditions.

Even if the target was appropriate (which it is not) the inability to predict with any certainty the likely level of increase in nitrate concentrations in the Christchurch aquifer, and indeed in other receptors, from the 'tail' effects of historic dairy intensification makes it even more critical that Council adopts rules that require more drastic and immediate nitrate reductions. In AWA's view, the only realistic means of both avoiding the serious health and environmental effects of dairy intensification, and of ensuring that any measures will in fact result in nitrate concentration reductions, is to significantly reduce cow numbers in the Nitrate Priority Area. AWA does not believe that computer modelling is a useful tool in measuring actual (as opposed to modelled) nitrate concentrations, given the acknowledged deficiencies in Overseer and the inevitable uncertainty in applying mechanistic models to a holistic system. Quite simply, if Council wished to hold nitrate levels in the Christchurch receptor area below a level of unacceptable risk, over the next 50 years,ⁱⁱ which in AWA's view is at least a responsible starting point, then the most transparent and effective way of doing so would be to introduce rules to cut cow numbers by at least 50%. Any other measures are in AWA's view simply facilitating avoidance of real reductions, allowing unacceptable risk levels, and maintaining unrealistic expectations within the farming community that dairy farming on free-draining soils, in close proximity to our second largest city, has a long-term future.

In summary' AWA's position is that the proposed rules around nitrate reduction are based on an outdated and dangerous target model which needs to be radically revised downwards, and time frames which unacceptably enlarge the risk to the community of Christchurch. AWA believes that in order to be effective, any rules must address and substantially reduce cow numbers in the target area. This should be introduced along with a Council-led campaign to enable a transition to alternative, economically sustainable farming practices and land uses.

AWA also disagrees with Council's proposal to allow abstractors to surrender stream-depleting groundwater and surface water takes in exchange for the right to take from deeper groundwater sources. In AWA's view this approach is contrary to wise and responsible guardianship of our life-sustaining resources. There is ample evidence of the environmental damage caused by long-term extraction of deep groundwater, including ground-level collapse, salination, loss of aquifer pressure and consequent drawdown of polluted water into lower levels of groundwater. Council has acknowledged that in fact the aquifer system in Canterbury is not characterised by disconnected, wholly confined aquifers, but that there is a great deal of connectedness and much 'leakiness' between layers. AWA is concerned that Council seems to continue to wish to find novel ways to allow over-extraction to continue, rather than signalling a need to use resources within ecological and social limits, having regard to the needs of future generations.

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

Thank you for considering our submission.

ⁱ Graham Fenwick (one of NZ's leading groundwater ecosystem scientist) suggests in his evidence to the Te Waikoropupu springs WCO hearing a trigger value of 0.4–0.5 mg/l as a precautionary value to ensure ecosystem health

ⁱⁱ Chris Hickey (one of NZs 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 50+ years).