Submission on Plan Change 7 to the Canterbury Land and Water Regional Plan

By **Cull, P**

Submitter Identification number: **PC7-489**

Wishes to be heard: **Yes**

Would consider making a joint submission at the hearing: **Yes**

Submitted on: **21/07/2019**

This submission was submitted via Environment Canterbury's online submission portal. The Submissions portal generates pdf files of submissions (as attached). However, some of the information that appears in the pdf files is not consistent with information the submitter entered into the portal, specifically, where submitters have ticked:

- "I wish to be heard in support of my submission" ; and
- "If others make a similar submission I will consider presenting a joint case with them at a hearing".

Additionally, the submissions portal has generated submitter and submission point numbers that are not consistent with the numbering applied in the Summary of Decisions Requested. Submission points in the Summary of Decisions Requested (SODR) are numbered using the following format:

PC7 – Submitter ID #.Submission point #

The correct submitter identification number and submitter information is specified above. This will be the number referred to in the SODR.

Proposed Plan Change 7 to the Land and Water Regional Plan

Form 5 Submission on publically notified proposal for policy statement or plan, change or variation

Clause 6 of Schedule 1, Resource Management Act 1991

To Environment Canterbury - Tavisha Fernando
Date received 21/07/2019 8:29:46 PM
Submission #3

Address for service:
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Wishes to be heard? No
Is willing to present a joint case? No

Proposed Plan Change 7 has been developed to respond to emerging resource management issues, to give effect to relevant national direction, to implement recommendations from the Hinds Drains' Working Party, and to implement recommendations in the Waimakariri and Orari-Temuka-Opihi-Pareora (OTOP) Zone Implementation Programme Addenda (ZIPA).

- Could you gain an advantage in trade competition in making this submission?
  - No
- Are you directly affected by an effect of the subject matter of the submission that
  (a) adversely affects the environment; and
  (b) does not relate to trade competition or the effects of trade competition
  - Yes

Submission points

Point 3.1

Submission

The increase in the proposed limit of Nitrate Nitrogen to 3.8 mgN/L will provoke unacceptable and possibly irrevocable contamination of the aquifers that supply the drinking water to the city of Christchurch, with corresponding adverse health effects for potentially generations to come.

"The role of nitrate as a risk factor for cancer and adverse reproductive outcomes must be more thoroughly explored before changes to nitrate
water quality standards are considered." - Mary H. Ward. Theo M. deKok, Patrick Levallois, Jean Brender, Gabriel Gulis, Bernard T. Nolan andcJames VanDerslice, ?Workgroup Report: Drinking-Water Nitrate and Health—Recent Findings and Research Needs, Environmental Health Perspectives Vol. 113, No. 11).

"Drinking water nitrate may act as a carcinogen via the formation of N-nitroso compounds, many of which are animal car? cinogens.45 N-Nitrosoureas can cause lymphomas in rats. Two studies of nitrosation in humans found that drinking water nitrate was positively associated with the endogenous formation of N-nitrosoprolin" - Ward, M., Mark, S., Cantor, K., Weisenburger, D., Correa-Villaseñor, A., & Zahm, S. (1996). Drinking Water Nitrate and the Risk of
Non-Hodgkin's Lymphoma. *Epidemiology, 7*(5), 465-471.

"These ecologic data support the hypothesis that there is a positive association between nitrate in drinking water and non-Hodgkin lymphoma and colorectal cancer." - Gabriel Gulis, Monika Czompolyova, James R. Cerhan, An Ecologic Study of Nitrate in Municipal Drinking Water and Cancer Incidence in Trnava District, Slovakia, Environmental Research, Volume 88, Issue 3, 2002, Pages 182-187

"The results of the study confirmed the role of high-nitrate level in drinking water as a risk factor for thyroid dysfunction in vulnerable population groups." - Penka D. Gatseva, Mariana D. Argirova, High-nitrate levels in drinking water may be a risk factor for thyroid dysfunction in children and pregnant women living in rural Bulgarian areas, International Journal of Hygiene and Environmental Health, Volume 211, Issues 5–6, 2008, Pages 555-559,

"High level of nitrate in drinking water due to excessive use of agriculture fertilizers, decayed vegetable water, domestic effluent, sewage disposal industrial discharges, leachable from refuse dumps, atmospheric and atmospheric precipitation has become a serious problem. Excess concentration of nitrate causes disease." - Manoj Kumar and Avinash Puri, A review of permissible

limits of drinking water, Indian J Occup Environ Med. 2012 Jan-Apr; 16(1): 40–44.

"An association between higher nitrate levels in domestic drinking water and incidence of childhood diabetes has been demonstrated. This was not
explained by the ethnic composition of the population, population density or socioeconomic status. Nitrate in drinking water may be a precursor of chemicals which are toxic to the pancreas." - Parslow, R., McKinney, P., Law, G. et al. Diabetologia (1997) 40: 550.

Relief sought

Delete provision, maintain current level of 0.6 mgN/L.

Section: Section 16 Schedules
Sub-section: Section 16 Schedules
Provision
General