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SUBMISSIONS ON VARIATION 1 – PROPOSED CANTERBURY LAND & WATER REGIONAL PLAN

Submitter:

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FIRST SUBMISSION

Section 11.4.34 **Halswell River/Huritini Catchment Flooding**

Resource Consent requirement for new stormwater discharges within Halswell river catchment.

OVERVIEW

Historically most of the route of the Halswell River was a series of very large swamps but from about the nineteen twenties considerable efforts went into improving drainage of the catchment area. The level of Lake Ellesmere has always been a key element in the drainage performance of the Halswell River and this is now controlled by opening the lake to the sea from time to time in accordance with an agreed consultation process. However mother nature shows just who is in charge so that big southerly wave and swell systems in the Canterbury Bight will from time to time make it impossible to open the lake even though opening trigger levels have been exceeded.

The current components of flooding chaos in the Halswell river system are initially saturated ground (as in a normal winter), a closed lake exit, a fairly high lake level (perhaps just below agreed trigger levels), and a 2 to 3 day rain-storm with gale to storm force winds from a southerly quarter. The storm event of July 2013 was a good example of all these factors combining.

In recent years an extra component has been added to the mix and this is the rapid run-off component of stormwater from residential development particularly of Port Hills origin. This is more or less the straw that breaks the camel's back, or in plannerspeak is described as a cumulative effect. Clearly the Halswell River has no spare capacity for coping with additional fast runoff type stormwater discharges associated with urban type development. The existing rule WQL7 has failed dismally hence the need for the above revision 11.4.34.

I **support** the proposed change as recorded in section 11.4.34 for the following reasons:-

1. The background situation detailed in the overview above.
2. Damage to property and crops in low lying land such as the floor of Lansdowne Valley has been exacerbated by residential stormwater run-off. Many of those discharges had been permitted under the WQL7 regime thus putting burden of proof for damage into the totally impractical area.
3. The existing rule WQL7 authorisation process effectively removes any control of river levels by the Regional Council. In other words the developer pours extra runoff into the river system and ECAN is somehow expected to make it go away.
4. WQL7 as it stands is totally inadequate in dealing with cumulative effects. The regional Council should have the say on which straw is likely to break the camel's back.

SECOND SUBMISSION

This is not so much a submission as a request for clarity and further information. I have serious concerns over nitrate and nitrite levels in ground water. From my skim reading of Variation 1 I have found considerable detail in the earlier sections regarding best practice, the **OVERSEER** system, nitrate nitrogen levels in ground water in the 1 to 2 ppm range, and so on.

Then there is a sort of quantum leap jump in what are regarded as acceptable nitrate levels to **“Average nitrate levels of 8.5 ppm in untreated drinking wells”**. This quantum leap in acceptable nitrate levels occurs without any credible linkage to earlier better practice approach and is also totally unspecific as to what geographical areas are supposed to tolerate the “average 8.5 ppm” level. The use of the term “average” also suggests peaks of well over 10 ppm which is definitely into the health risk area for very young children.

Further, I can find no reference whatsoever as to acceptable nitrite levels in groundwater either up-country or downstream catchment. If the assumption has been made that nitrite levels are not an existing or perceived future problem then I can only suggest further reference to experience in the USA particularly when urea and irrigation is applied over sandy or stony sub-soils. The MCL levels used in drinking water standards in the USA are 10 ppm for nitrate nitrogen and 1.0 ppm for nitrite nitrogen. If there is an assumption that nitrite will oxidise to nitrate before getting into groundwater then that is clearly an invalid assumption based on the normal pattern where iron is a groundwater contaminant. In the case of groundwater containing iron in shallow wells in our district the iron is always present in the ferrous form and does not oxidise through to the ferric form until the water extracted from those wells has had exposure to air in a water tank or similar for 24 hours or so. There is every reason to expect the nitrite situation to follow suit and not oxidise through to nitrate in groundwater.

I therefore oppose any nitrate nitrogen levels of 8.5 ppm being tolerated as an average level in drinking water wells and would also regard any nitrite nitrogen levels in groundwater exceeding 1.0 ppm as totally unacceptable. Above all I seek complete transparency on the issues of nitrate and nitrite levels in groundwater.

Ian H. Duff

Dated 20th March 2014

I wish to be heard in support of these two submissions