



22 April 2013

The Hearing Commissioners
Proposed Land & Water Regional Plan
Environment Canterbury
PO Box 345
Christchurch

Dear Commissioners

We presented part of our submission to you on Wednesday 10 April, and you asked me some questions and provided me the opportunity to respond in writing at a later date. The points you queried related to Table 1c and the consequent policies, and the corresponding current policies in the operative Natural Resources Regional Plan (NRRP). If the following does not address your questions then please let me know. I haven't attached the relevant NRRP provisions as I believe it is important to read them in context.

The Table 1c covers groundwater quality and quantity outcomes. The technical deficiencies that I raised have already been properly described and addressed in the NRRP as follows (pages 39 and 40 of the Water Quantity Chapter, and pages 23 and 24 of the Water Quality Chapter, of the NRRP contain summary outlines which are logically presented and cover all the aspects):

1. NRRP Issue WQN3 and its Objective WQN3 clearly set out the relevant water quantity aspects. Comparing this to the Proposed L&WP Table 1c shows the deficiencies. For example:
 - a. Table 1c requires that "There is no landward movement of the salt-fresh water interface...". The correct technical description is NRRP Objective WQN3 (e) and (f), and the policies are Policy WQN10 (2) and (3) and Policy WQN11.
 - b. Table 1c requires that for confined aquifers "The upwards hydraulic pressure gradient is maintained in all aquifers." The correct technical description is NRRP Objective WQN3 (b), (d) and (g). The policies are WQN8 and WQN10.
 - c. Table 1c requires that for unconfined aquifers "Long-term average groundwater levels ... is maintained." The correct technical description is NRRP Objective WQN3 (b) and (f). The policies are WQN8 and WQN11.
 - d. What is important here, apart from correct technical terminology, is that a comprehensive set of Objectives and Policies are necessary to deal with all aspects of groundwater management. Trying to reduce these provisions to a few provisions in Table 1c means that several interrelated aspects are missed. Whether the NRRP provisions can be easily incorporated into the framework of the PL&WP is problematic. Table 1c certainly could not be amended to incorporate all the necessary provisions. My view is that the wording in the NRRP is probably necessary.

2. The PL&WP Policy 4.49 (c) and (d) were identified as technical deficiencies. The NRRP Objective WQN3 (all clauses) and all of Policies WQN8, 10 and 11 are required to comprehensively cover abstraction of groundwater outside the allocation zones. The clauses (c) and (d) cover a small part of the overall management regime, and that small part is covered properly in NRRP Policy WQN8.
3. Table 1c has numerical values for nitrates and EColi and other determinands, but only for shallow unconfined gravel aquifers. The coastal confined gravel aquifers and deep unconfined aquifers recharged by rivers have water quality “state” outcomes. The corresponding NRRP covers this in Issue WQL2 and its Objective WQL2.1 and policies and rules. The problem with Table 1c is that it doesn’t properly describe the different groundwater management units.
4. It is not a simple matter to address all the deficiencies in Table 1c. It appears to me that it is not possible to summarise outcomes for groundwater quantity and quality into such a succinct Table. I believe that the goal of a plan is to provide certainty. This usually means that more detail has to be included so that each aspect is addressed through Objectives and Policies.

Yours sincerely

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