
In the matter of: Clauses 6 and 8 of Schedule 1 – Resource Management Act 1991 – Submissions on publicly notified plan change and variation – Proposed Plan Change 1 and Variation 1 to Waikato Regional Plan – Waikato and Waipa River Catchments

And: **Wairakei Pastoral Ltd**

Submitter

And: **Waikato Regional Council**

Local Authority

SUPPLEMENTARY EVIDENCE 1 OF DWAYNE CONNELL-MCKAY

Block 3 Hearing Topics

Table 3.11-1 Freshwater Objectives

Dated: 12 July 2019

SUPPLEMENTARY PLANNING EVIDENCE

BLOCK 3 HEARING TOPICS

Table 3.11-1 Freshwater Objectives

1. SUMMARY

- 1 The Joint Witness Statement (**JWS**) is incomplete and has not been able to provide a consensus view on the inclusion of attributes or amendments to Table 3.11-1.
- 2 The associated nutrient attributes report (JWS, Attachment 2) contains a number of recommendations that could assist in addressing the issues I have identified with Table 3.11-1 (Block 1 evidence). These include:
 - 2.1 Introduction of freshwater objectives for TP and TN in the mainstem (Options 2C and 1C);
 - 2.2 Option 3 to include targets and limits for the Sub-catchments; and
 - 2.3 Additional nutrient monitoring sites should be included in Table 3.11-1 (Tahorakuri and Karapiro).
- 3 Finally, I believe the data error concerns outlined in WPL's evidence and submissions could be resolved by updating the Table 3.11-1 provided in Dr Scarsbrook's evidence in Block 1.

2. BACKGROUND

- 4 My name is **Dwayne Connell-McKay**. I have the qualifications and experience recorded in my statement of evidence filed in relation to the Block 1 Hearing Topics.
- 5 My supplementary evidence has been prepared in accordance with the Code of Conduct for expert witnesses as set out in Section 7 of the Environment Court of New Zealand Practice Note 2014.
- 6 My supplementary evidence (as requested by the Panel's minute, 25 June 2019) provides an update in relation to the implications of the Joint Witness Statement on Table 3.11-1 freshwater objectives for the PC1 objectives, policies, and rule framework.

3. STAGING THE TRANSITION TO THE 80-YEAR GOAL

- 7 Table 3.11-1 states the numeric freshwater objectives to give effect to the NPS-FM and plays a key role in staging the transition to the 80-year goal (Objective 1) to restore and protect water quality in the Waikato River catchment and sub-catchments in accordance with the Vision and Strategy.

4. MAKING REDUCTIONS IN DIFFUSE DISCHARGES VIA CATCHMENT WIDE RULES AND THE NRP

TOPIC C1. DIFFUSE DISCHARGE MANAGEMENT

- 8 Table 3.11-1 therefore plays a key role in making reductions in diffuse discharges associated with farming activities via the the PC1 rule framework.
- 9 As a result of the various errors and omissions in Table 3.11-1 summarised in the Block 1 evidence of Dr Neale, I made the following recommendations in para's 6-9 of my Block 1 planning evidence:

- 6 *In order to correct the uncertainty around Table 3.11-1, I have concluded from evidence presented that the following as a minimum should be undertaken:*

6.1 Correcting the water quality data used to determine the current state (2010-2014) so as to remove the climatic bias, and to ensure parameters calculated can be replicated.

6.2 Correcting the Short-Term and 80-year Freshwater Objectives in Table 3.11-1.

- 7 *Table 3.11-1 needs to be repopulated:*

7.1 Using corrected current state values, derived as per Dr Neale's evidence:

7.2 By adding a column to include 'current state' values;

7.3 By adding row to include Sub-catchments 66A and 66B;

7.4 By adding a column (or new Table 3.11-3) to include 'load' values, derived as per Dr Neale's evidence; and

7.5 *By adding a column to include 'Sub-catchment number'.*

8 *Given the complexity of the task to correct the 'current state' data and Table 3.11-1 I recommend that the Commissioners:*

3.1 *Direct the WRC to release the 10 years of data as recommended by Dr Neale to all relevant technical experts; and*

3.2 *Initiate conferencing with all relevant technical experts immediately, to be concluded by the end of Hearing Block 2, including the production of a revised Table.*

9 *To enable Objective 3 to be implemented, in addition to correcting Table 3.11-1, amendments will also be required to the policies, methods and rules in PC1; these will be addressed in Block 2.*

10 Having reviewed the JWS from a planning perspective it appears that the technical experts have considered a number of these matters; however, most have not been resolved and in my opinion remain relevant in terms of my critique of Table 3.11-1. My review of the JWS indicates that:

11 The JWS includes a series of discussion papers on a range of 17 attributes that may be relevant in the context of maintaining and enhancing the quality of water in the Waikato River catchment and sub-catchments. The discussion papers address the relevance of each attribute, critique current technical approaches, and in some cases provide recommendations for changes to Table 3.11-1. Overall consensus does not appear to have been achieved by the technical experts (JWS, Table 2, pp12-14), however a majority was reached for several of the critical attributes considered in my Block 1 evidence (JWS, Attachment 17 – Statements of agreement and disagreement).

12 The reasons for disagreement do not appear to have been explored in detail. For example, they do not appear to explore whether any of the matters could actually be resolved.

13 Relative to my recommendations from Block 1 the following matters are addressed in the JWS:

13.1 The nutrient attributes report (JWS, Attachment 2) commented that the mainstem attribute levels for TN (Option 1C) and TP (Option 2C) should be changed. This recommendation aligns with my recommendations in para

- 7.4 of my Block 1 evidence that load values should be included in Table 3.11-1.
- 13.2 The nutrient attributes report also commented that short-term ‘thresholds’ should be provided for all Sub-catchments in Table 3.11-1. This recommendation if accepted would align with my Block 1 evidence in that the thresholds could be applied as limits and targets to each Sub-catchment as a new ‘Loads Table’.
- 13.3 The JWS (p6) records that a consensus was reached ‘that each of the (now) 76 sub-catchments should now have a target and limit based on the short term PC1 objectives’. I note from the nutrient attributes report that Sub-catchment 66A (Tahorakuri) and 66B (Ohakuri) have been included in the technical expert assessment. This directly supports the recommendations made in my Block 1 evidence.
- 14 I note that the JWS considers whether ‘Riparian margins’ could be an attribute (of freshwater) under the NPS-FM. While I do not consider that riparian margins are an attribute as defined in the NPS-FM, I do think that they could be considered a ‘Limit’ under the NPS-FM and believe that they can be considered as such under PC1 provisions as amended by WPL.
- 15 Finally, in my opinion the JWS does not appear to resolve the following matters:
- 15.1 The JWS does not appear to provide an assessment of the current state of water quality, and indicates (p5) that this is one of the matters that was not addressed by the expert witness conferencing. As a result, Table 3.11-1 has not been updated to provide amended short-term (2016-2026) or long-term (2026-2096) freshwater objectives.
- 15.2 The JWS does not appear to consider how the 17 attributes considered could fit together to provide a coherent management framework for restoring and protecting water quality in the Waikato River catchment and Sub-catchments.
- 15.3 No cost benefit analysis appears to have been carried out to assist in determining whether any of the additional attributes proposed should be included in Table 3.11-1.
- 15.4 The question of whether any of the sub-catchments (Map 3.11-2) should be redefined is listed (p4) as a matter that was not considered.

- 16 These outstanding matters could in my view be resolved by updating the version of Table 3.11-1 produced in evidence by Dr Scarsbrock, in the following way:
- 17 Based on Dr Neale's and Mr Williamson's Block 1 evidence the following amendments Table 3.11-1 (as notified) appear to remain necessary; and if left unresolved the PC1 rule framework will not function efficiently and effectively:
- 17.1 Correct the statistical and other data errors identified (Dr Neale);
 - 17.2 Base the current state data on a 10-year time period as per Mr Williamson's Block 1 evidence;
 - 17.3 The inclusion of TP and TN loads;
 - 17.4 Sub-catchment 66 should be subdivided into Sub-catchments 66A and 66B based on the Block 1 evidence from Dr Neale and Mr Williamson.
- 18 In my view, a single-day conferencing ~~meeting~~ between the experts focused on evidence from Dr Neale and Dr Scarsbrock regarding the above matters, while not resolving whether other attributes should be included in Table 3.11-1, could assist in producing an amended version of the table that would be a marked improvement on the notified version.

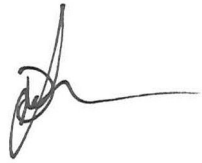
TOPIC C9. FARM ENVIRONMENT PLANS

- 19 Table 3.11-1 provides the baseline for the mitigations and actions that are to be put in place and implemented during the PC1 period 2016-2026 so that the short-term goals (Objective 3) and long-term goals (Objective 1) can be achieved via Farm Environment Plans and consent conditions when land use consents are granted for farming activities.

5. CONCLUSIONS

- 20 The JWS is incomplete and has not been able to provide a consensus view on the inclusion of attributes or amendments to Table 3.11-1.
- 21 The associated nutrient attributes report (JWS, Attachment 2) contains a number of recommendations that could assist in addressing the issues I have identified with Table 3.11-1 (Block 1 evidence), these include:
- 21.1 Introduction of freshwater objectives for TP and TN in the mainstem (Options 2C and 1C);

- 21.2 Option 3 to include targets and limits for the Sub-catchments;
and
- 21.3 Additional nutrient monitoring sites should be included in
Table 3.11-1 (Tahorakuri and Karapiro).
- 22 If additional (limited) expert witness conferencing is not practicable
to further clarify the attributes both existing and to be included,
Table 3.11-1 will need to be used in the interim as the best (but
unsatisfactory) available information, with the remaining issues
possibly needing to be resolved through future processes.



Dwayne Connell-McKay

Director – Thornton Environmental

12 July 2019