

## EXPERT WITNESS CONFERENCE

Proposed Natural Resources Plan

Topic: **PNRP Table 3.4 - Ecosystem health and mahinga kai objectives**

Date: 27 February 2018

Venue: Video -conference

Witnesses present:

Name	For
Dr Richard Storey	Greater Wellington Regional Council
Prof Russell Death	Wellington Fish and Game Council
Ms Kate McArthur	Minister of Conservation and Rangitāne o Wairarapa
Jo Frances	Facilitator and note-taker

Environment Court Practice Note:

It is confirmed that all present:

- Have read the Environment Court Practice Note 2014 Code of Conduct and agree to abide by it.

And in particular

- Have read the Environment Court Practice Note 2014 in respect of Appendix 3 – Protocol For Expert Witness Conferencing and agree to abide by it.

## Joint Conferencing Statement

### 1. Assumptions/Background

1. Limited to scope of submissions and not contemplating fundamental revision of the PNRP structure or policies.

### 2. Points of Agreement

- The experts acknowledge that nutrients can be a stressor on MCI.
- In some situations other stressors can be more important.
- Periphyton is a driver in the relationship between nutrients and MCI. It is the primary driver for the range of proposed nitrate levels in Prof. Death's and Ms McArthur's evidence.

- Nutrients can directly affect macro-invertebrates at higher concentrations (toxicity), but the relationship between nutrients and macro-invertebrates at lower concentrations is not well understood.
- Managing nitrogen and phosphorus for MCI is just one tool in the Plan toolbox – there are others.
- Managing nitrogen and phosphorus may not be the only thing that needs to be done where MCI objectives are not met.
- Reducing nutrients, alongside other provisions to improve ecosystem health, can deliver corresponding MCI improvements, depending on river type.
- For some river types, a tool for managing nutrients would be a useful part of the toolbox.
- Land-use (e.g. urban vs. agricultural) influences the relationship between nutrients and MCI.
- When improvements are made to the water quality and/or physical habitat of a stream or river it is difficult to predict precisely how the MCI will change. There is a level of uncertainty in how MCI will respond.

### 3. Unresolved matters

- Whether the correlation between nutrients and MCI in Prof. Death's evidence is appropriate for establishing nutrient limits to achieve specific MCIs.
- Whether we can predict the MCI level that will be achieved from achieving specific nutrient concentrations.
- Whether we can use the same relationship between nutrient concentrations and MCI levels for all river types.
- Regarding the point of agreement "*For some river types, a tool for managing nutrients would be a useful part of the toolbox*". The experts disagree whether they can identify which river types such a tool would be effectively applied to:
  - Prof Death and Ms McArthur contend they can identify river types where managing nutrients is the appropriate tool (e.g. large lowland rivers)
  - It is Ms McArthur's view that for river types with a large proportion of land-use impact, nutrients are important for management.
  - Dr Storey contends that the experts present in the conferencing haven't resolved which river types, or how to define the river types, and this could not be done during the conference (but could be done in future). Dr Storey also believes a more nuanced approach would be required to include other variables such as land-use type.
- Ms McArthur and Prof Death contend that if managing nutrients for MCI is not included in the PNRP (inserted in Table 3.4), then it is not in the toolbox for the Regional Council to use to manage for MCI. There is nothing in the PNRP that links nutrient concentrations to the MCI objective – and so no mechanism to reach these targets.
  - Dr Storey contends that periphyton is already in the table, and it was agreed that it is the primary driver of the relationship at the concentrations relevant to the table. It is beyond his expertise as a scientist to say whether effective planning tools require the drivers of periphyton growth (as well as periphyton itself) to be included in the plan. .

- Prof Death and Ms McArthur contend that there is no mechanism in the pNRP to manage periphyton levels, and thus nutrients need to be included to manage for periphyton and MCI outcomes.

Signed:

Name	For	Date	Signed
Dr Richard Storey	Greater Wellington Regional Council	1 March 2018	
Prof Russell Death	Wellington Fish and Game Council	1 March 2018	
Ms Kate McArthur	Minister of Conservation and Rangitāne o Wairarapa	1 March 2018	
Jo Frances	Facilitator	1 March 2018	