

Meeting notes

Hurunui Science Stakeholders Group

3.00 – 6.00pm Wednesday 07 February 2018 at St Johns Hall, AMBERLEY

Attendees:

Hurunui Waiau Zone Committee: John Faulkner, Cynthia Roberts, Ben Ensor, Michele Hawke

Peer Reviewers: Greg Burrell

Environment Canterbury: Ian (Whit) Whitehouse, Ned Norton, Suz Gabities, Kimberley Dynes, Jeanine Topelen, Lisa Jenkins

Hurunui Water Project: Christina Robb

Amuri Irrigation: Andrew Barton

Emu Plains Irrigation: Brian Elwood

Te Rūnanga o Ngāi Tahu: Lisa MacKenzie

Hurunui District Landcare Group: Joshua Brown

Federated Farmers: Lionel Hume

Fish and Game NZ: Scott Pearson

Department of Conservation: John Benn

Others: Jane Demeter

Welcome and introductions

Key points

- Participants introduce themselves.
- The zone committee is asking the Science Stakeholders Group to review technical information and ensure it is “fit for purpose” to help the committee make its recommendations.

What are the predicted environmental effects of a percent increase in nitrogen and Phosphorous for the Waiau River catchment?

Kimberly Dynes presented a summary of the draft memo circulated to the group and clarified a number of points. In particular, it was noted that there is no Chlorophyll A monitoring site in the

lower Waiau and impacts of increased nutrient loads must therefore be modelled and are not ground truthed. Ben Ensor indicated he could assist in establishing an appropriate monitoring site on the lower Waiau.

A number of related questions / topics were identified. Those questions and the discussion are summarised below:

1. What is the understanding of the impact of nitrogen concentrations for periphyton versus chronic toxicity versus acute toxicity?
 - Ned clarified that the bands set in the NPSFM for managing periphyton are a magnitude below acute invertebrate toxicity levels and also manage for chronic toxicity
2. Likely versus worst case permitted dryland farming
 - Ned clarified that the 3% increase in N predicted from dryland farming (used in predicting likely additional N load in the Waiau) represents a plausible worst case scenario based on the lines of evidence that have been presented to the Zone Committee so far including modelling work by Ognjen Mojsilovic, and survey work undertaken by Josh Brown.
3. Recognising two parallel processes
 - It was acknowledged that there are two processes currently underway, one being the Emu Plains consent process and the other being the Zone Committee review of the need or not to strengthen the load limits in the Waiau. The consent process will likely be where decisions will be made that will have an impact on the river in the more immediate future.
4. How do increasing nutrient concentrations relate to the NPSFM concepts of maintain or improve?
 - It is likely that this question will be addressed by the panel in relation to the Emu Plains hearing
5. What is the likelihood of further irrigated development beyond that assumed in the Emu Plains consent application?
 - There is some flat unirrigated land in the Hanmer basin but there is no water allocation available to enable irrigation of that land. There are some pockets of land near Spotswood that are flat enough to irrigate and there is water available, but because the land is a distance from the river, it would require a community scheme to build the necessary infrastructure (including storage) – it is unlikely this would occur within the foreseeable future
6. What is the consequence of all irrigation take consents being 100% utilised?
 - Because allocations are set at the maximum necessary to provide for a certain level of reliability, it is unlikely allocation would be 100% utilised over an entire season. For example, this season AIC utilised their full allocation for a few days prior to Christmas, but over January have utilised 9 of a possible 11 cumecs. Generally about 40 – 50% of allocation is utilised
7. What are the effects of periphyton flushing into the coastal marine environment?
 - Not a lot of science has been done in this space because it is generally accepted that Canterbury coastlines are energetic and not confined (i.e. sheltered bays and

harbours) and so the effects of a river discharging are likely minimal. Environment Canterbury have committed to undertaking more work in this space through the long term plan process.

8. Can we address the inherent uncertainty in the science by building in a precautionary buffer to the assumptions made around the impacts of landuse?
 - We could look at the potential impacts of a variety of percent increases in nutrient load, but a decision maker will at some point have to make a call as to what is plausible.
9. How will climate change effect periphyton growth?
 - Has not been modelled
10. How will the policy of the new government effect landuse impacts?
 - Unknown

The meeting concluded at 5.30. The next meeting of the SSG will be Wednesday 07 March