TLG Comment on Setbacks

14th December 2015

Background

At CSG #20 the CSG discussed mitigations that might be included in catchment-wide rules and/or as part of tailored property plans. During that discussion CSG requested that some comment on setbacks be received from the TLG. In particular, CSG were exploring the option of a catchment-wide rule for a setback of 5 metres and wanted some comment on the technical robustness of such a proposition.

Comment

1. The report to the CSG by Doole (2015) summarised previous studies on the efficacy of streambank fencing for removing the four contaminants and derived estimated efficacies for inclusion in the scenario modelling.

2. For the four contaminants, the major benefits of streambank fencing are derived through the act of stock exclusion from the stream and streambank and increasing setback distance (i.e. buffer width) has diminishing returns in terms of contaminant removal. Put another way, the width of the setback is of secondary importance to the existence of stock exclusion in the first place. On that basis, the modelling assumed that whenever and wherever streambank fencing was required that this occurred with a nominal setback distance of 5 metres and that the efficacies used represent an average of that which would occur across the landscape.

3. From a technical perspective, setback distances are most appropriately established reach-by-reach in such a way as to vary with the local circumstances of terrain, adjacent land use activities, and drainage. Such an approach would be consistent with implementation as part of a tailored property plan.

4. Although the focus of the CSG's deliberations is in dealing with the four contaminants, riparian setbacks can serve a wider range of ecosystem services including those associated with benefits to stream ecosystem health and biodiversity. Where these other benefits are important, then setback distances (and other aspects of riparian design) need to be established accordingly. A generalised view of this is presented in the diagram below and the interested reader is referred to a presentation from John Quinn available at http://agscience.org.nz/PDF/John%20Quinn.pdf

5. **We conclude** that the technical evidence would support a catchment-wide rule related to stock exclusion but not a blanket setback distance of 5 metres. Setback distances could be narrower or wider than 5 metres, depending on local stream reach circumstances and whether the riparian zone is required to fulfil wider functions.

The Fourth Report of the Land and Water Forum has useful and pertinent sections on stock exclusion and riparian management and our conclusions are consistent with the Forum's recommendations, for example:

"Recommendation 29: A national stock exclusion regulation should apply to all those livestock types that can cause significant damage from incursions into waterways, including:
a. dairy cattle
b. beef cattle
c. deer

d. pigs”

“Recommendation 31: The national stock exclusion regulation should include a requirement that when permanent fences are erected to exclude stock, they should be placed the appropriate distance back from the waterway. The appropriate setback distance will vary at different points along the waterway and will be determined by an on-farm assessment required as part of GMP, as per recommendation 39 of this report.”

“Recommendation 39: Riparian setbacks and management strategies should be included in GMP requirements, either as part of industry GMP schemes or council GMP rules, where they are an appropriate mitigation.”

“Recommendation 41: Councils should impose riparian setback and management rules over and above GMP requirements in catchments with specific water quality issues, where this is an effective way of managing a particular issue. Councils should also consider catchment-specific riparian management rules for critical source areas and areas of specific ecological, social or cultural value.”

Doole G.J. (2015) Description of mitigation options defined within the economic model for the Waikato Regional Council Healthy Rivers Wai Ora Project. Description of options and sensitivity analysis. 28 September 2015. Prepared for the Technical Leaders Group of the Healthy Rivers/Wai Ora Project.