

Rangitāiki Freshwater Futures Community Groups

Workshop 8a (optional) Notes:

1. **Opportunities & Barriers to Freshwater-Related Sustainable Economic Growth**
2. **Surface Water Quality Catchment Modelling Results**

Acacia House, Whakatāne

Tuesday, 23 October 2018, 9am – 12.30pm

Members present: Alamoti Te Pou, Alan Law, Cathy Brown, Cr Bill Clark, James Doherty, Larry Wetting, Linda Conning (first item only), Luke Gibson, Keri Topperwien, Mark Ross, Matt Gow, Ngapera Rangiaho, Nicholas Woodley.

BOPRC staff and contractors: Santiago Bermeo, Sue Simpson, Simon Stokes, Nicki Green

Opportunities & Barriers to Freshwater-Related Sustainable Economic Growth

(Presented/led by Santiago Bermeo)

The Council has engaged Aqualinc Research to undertake an assessment of freshwater-related opportunities and barriers to sustainable economic growth throughout the region, as an action from the [Regional Growth Study](#). This work is not directly related to our Plan Change 12 work, although the outputs will be of relevance. The objective of this work is to answer the following questions:

- Is fresh water (quantity) a constraint to economic growth?
- What is the economic growth opportunity created from fresh water, including through more efficient allocation and use?
- Subject to the extent of any such constraints and opportunities, is there a need for irrigation infrastructure in the region and if so where and for what purpose?
- Are there other opportunities and barriers to economic growth?

Aqualinc looked at the current status of water allocation (under PC9 interim allocation limits, which are likely to change under PC12) and a future scenario ("Scenario C", the same one considered in the catchment model) in terms of land use and water demand.

It is acknowledged that our databases and freshwater accounts have a number of limitations which are in the process of being addressed; the analysis is based on the best information we have now. Andrew Millar covered groundwater availability in Workshop 7. This now includes an assessment of groundwater availability for Mid-Upper Rangitāiki. The Council intends to put real-time assessments of surface and groundwater availability online soon, once some of these limitations have been addressed.

Despite the limitations, the assessment found that:

- In lower Rangitāiki, some groundwater zones are over allocated while others are not. Overall, total allocation is slightly less than the cumulative allocation limit across all zones.
- On the other hand, there is large headroom¹ for surface water in lower Rangitāiki.
- In mid-Upper Rangitāiki, there is large headroom for groundwater, although a significant amount of this would be under land that is in exotic forestry or within Te Urewera. However, any new groundwater consents would be subject to not affecting surface water flow (which

¹ Where total water allocated is less than the total allocation limit.

this assessment has not considered) as this would derogate from existing surface water consents.

- Surface water in mid-upper Rangitāiki is considered over-allocated² due to the prevalence of existing consents (e.g. for hydro-electricity generation).

According to Aqualinc’s analysis, if allocations for irrigation are reduced to reasonable use rates, additional headroom for development can be created in the lower Rangitāiki for both surface water and groundwater. This would be sufficient to provide for the development projected in “Scenario C”.

In mid-upper Rangitāiki, if allocations for irrigation are reduced to reasonable use rates, over-allocation could be phased out and some headroom created for new takes within allocation limits. However, this would not be sufficient to provide for all the development projected in “Scenario C”. At a general level, available groundwater would be sufficient to provide for most of the development projected in “Scenario C”.

A complete draft of Aqualinc’s analysis will be circulated to the community group when available.

Discussion and questions

We discussed pros/opportunities, cons/barriers and information gaps relating to irrigation development in the catchment generally.

Pros Opportunities	Cons Barriers	Information gaps
<ul style="list-style-type: none"> • Employment opportunities • Land availability (e.g. CNI Kāingaroa Forest) • Go for [or stick with] trees (as they don’t need irrigation) • Diversified portfolio of activities but need flexibility • Need good information on crop suitability* (Opportunity for PGF investment in this area) • Scale (e.g. forestry) 	<ul style="list-style-type: none"> • Limited access to capital • Water quality implications • Surface water availability in Mid-Upper Rangitāiki is constrained by existing consents (e.g. hydro-electricity generation) • Lack of willing and trained labour • Limited access to markets (e.g. processing plants) • Limited technical capability (e.g. rural professionals) with an environmental and economic focus* • Limited domestic market for perishable products (including proximity, cost – particularly for upper catchment) • Limited transport infrastructure (particularly for upper catchment) • As a consequence of the above, more vulnerable to price drops [or cost increases] • Very limited land use options in Te Urewera • Funding for research* (landowners shouldn’t be relying just on trial & error) • Economic shocks, social licence • Inequitable water allocation 	<ul style="list-style-type: none"> • Suitability of land for different crops* - need land use change research close to the land users³ • Big catchment with different conditions so limited opportunity to generalise research findings.

- Members highlighted that existing consents in mid-upper Rangitāiki (e.g. hydro-electricity generation) present a major challenge for development in that part of the catchment. New consents can’t generally derogate from existing consents. However, there may be opportunities for agreements between different resource users to enable further use of the resource. A member noted that this was likely to be subject to payment for the water, which would not seem appropriate.

² Where total allocation exceeds the cumulative allocation limit.

³ However, some members considered that there already is a lot knowledge held by local land owners.

- One member noted that the reasonable use rates for pasture in mid-upper Rangitāiki estimated by Aqualinc are too low. Previous work undertaken by Plant & Food Research on the Galatea Plains to refine Galatea Sands properties in S-Map was noted. [It appears this issue has been addressed within SPASMO (the Plant & Food Research model used by our Consents Team to assess reasonable use), but it hasn't been addressed in S-Map and may not be able to be addressed within the Aqualinc analysis due to the scale of the analysis. This will be noted as a limitation].
- There are different models to estimate reasonable use (e.g. SPASMO, SMWBM, IrriCalc, Hydrus, etc.). In general it is expected that they would come up with similar answers but occasionally, it appears they don't always.
- Central government has signalled amendments to the RMA that would make it easier for regional councils to review consent conditions (such as by reducing allocations to reasonable use prior to expiry to "unlock" some water).
- Examples of constraints to development are resourcing (possibly a bigger barrier to growth than water), availability of trained and willing labour, knowledge of land suitability and existing consents.
- Strategic conversations on economic growth, big picture thinking and capital investment should factor into future land use in the catchment.
- Questions:
 - o What happened to the "recharge areas" under the previous (2016) groundwater availability assessment? The current availability assessment simplifies classifications slightly. The zones previously defined as "recharge areas" effectively have a nil allocation limit. Therefore, if there are any consents for those zones, they are now considered "over-allocated" (as is the case for the Waikowhewhe and Mangamako zones in lower Rangitāiki).
 - o How far back do records for recharge estimates go? As long as available rainfall records, which would capture wet years and dry years.

Surface water quality catchment modelling results

This part of the workshop is to present and discuss surface water quality modelling results, for those members that couldn't make it to Workshop 8. Refer to the notes from Workshop 8 for a summary of the presentation and discussion. Other topics raised during this workshop included:

- Management of gorse, noting there is not a lot of gorse in the catchment.
- Noted that the lower Rangitāiki catchment is one of [Fonterra's 50 priority sustainable catchments](#).
- Noted that as a next step, we will test the impact of the M1 mitigation bundle in the catchment model and see how far that gets us.

We will keep in touch with any new information that becomes available between now and the end of the year, but our next workshop is likely to be in the new year.