

Confirming the options for testing alternative minimum flow and allocation 'futures'

Key points:

- Higher minimum flows favoured
- No interest in options with lower minimum flows at this stage
- Interest in knowing more about the connection between life-supporting capacity and MALF
- Committee felt they needed further information and clarity on FMUs etc to settle on appropriate scale of assessments. For now, whole of catchment is a given. Individual example catchments can be tested while scale issues being resolved.
- This is a starting point, opportunity to refine and test other options

Options to test	Scale	Can it be modelled?	Comment on approach
<p><u>Higher minimum flows</u> reflecting cultural values – to form upper bound of options to test</p>	Whole of catchment	Yes	<p>Broad scale assessment of different order streams and rivers within the Ruamahanga catchment can be assessed using EFSAP. Will deliver maps and decision space diagrams showing average results for reliability and habitat change.</p> <p>In addition to the whole catchment modelling we could also take some actual natural flow time series to test Caleb's recommended flows. Eg, Waipoua, Waiohine and Kopuaranga. Output will be impact on reliability. Spreadsheet analysis – possibly re-work existing IFIM models</p>
<p><u>Status quo</u> minimum flows and allocation.</p> <p>Subsets: status quo minimum flows with <u>lower allocation</u> and <u>multiple band/block</u> allocation</p>	Whole of catchment	Yes	As above. Broad scale assessment of different order streams and rivers within the Ruamahanga catchment can be assessed using EFSAP. Will deliver maps and decision space diagrams showing average results for reliability and habitat change.
<p>Optimum <u>minimum flows</u> required to sustain the following values:</p> <ul style="list-style-type: none"> • Ecological • Cultural • Recreational <p>(the idea being to take the largest and then see how much 'new' water is required to achieve desired reliability)</p>	Whole of catchment	Not yet	<p>Cultural values are assessed in the first option above.</p> <p>Ecological and recreational values need to be more explicitly identified (and at scale of interest) before the flows requirements can be assessed.</p>
<p><u>Natural state</u> (ie, pre-settlement) flows</p>	Whole of catchment	Partial.	<p>Fully natural state predictions would require re-setting the baseline land use layer in the hydrological model to something resembling pre-settlement landscape (fully forested, swamp). Not practically feasible in time available.</p> <p>However, we will be producing a natural state flow scenario in the full modelling in which the impact of all abstractions is removed. This should be a good baseline to work from with respect to minimum flow and allocation limit setting.</p>