

## Selwyn Te Waihora groundwater allocation & role of Central Plains Water

- River flows and groundwater levels are at record lows reflecting a series of dry winters. There is also increased public pressure to improve flows in the Selwyn River and lowland streams.
- Groundwater abstraction accounts for more than 95% of the allocated volume of water in the Selwyn Waihora catchment.
- Groundwater abstraction in the catchment increased steadily from the late 1990s to the point now where groundwater abstraction can (but doesn't always) exceed half the volume of recharge to groundwater.
- The flows in the Selwyn River and the lowland streams in the Selwyn Te Waihora catchment have been impacted by the long term effects of groundwater abstraction and climate variability.
- During the Selwyn Te Waihora limit setting process (2012 and 2014) the Selwyn Waihora Zone Committee recommended to Environment Canterbury that combined surface and groundwater allocation limits for the catchment be set to provide for ecological and cultural flows in the Selwyn River and the lowland streams<sup>1</sup>.
- If the ecological and cultural flows sought were solely delivered by revising the consented allocation it was projected, at the time, that there would need to be an **80% decrease in the allocation** across both the Selwyn/Waimakariri and Rakaia/Selwyn Waimakariri zones<sup>2</sup>.
- The recommendation of the Zone Committee was to implement a package of actions.
- The Package included Managed Aquifer Recharge (MAR), Targeted Stream Augmentation (TSA) and importantly the allocation also took into account the contribution from Central Plains Water (CPW) Development.
- The contribution from CPW included an expected 30,000ha of new irrigation that would provide additional recharge to groundwater and the retirement of 30,000 ha of existing groundwater consents (leaving water previously allocated for 30,000 ha of irrigation in the groundwater system).

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<sup>1</sup> Selwyn Waihora Zone Implementation Programme Addendum October 2013, page 10

<sup>2</sup> Selwyn Waihora Zone Implementation Programme Addendum October 2013, page 13

- The revised allocation limits, based on contribution from MAR, TSA and CPW to help achieve the ecological and cultural flows sought, was incorporated in the Selwyn Waihora Plan Change to the Canterbury Land and Water Regional Plan. The Plan Change became operative in February 2016.
- The result was consent holders could maintain their existing allocations. New irrigation takes are however prohibited, transfers of water are required to surrender a proportion of water on transfer and new minimum flows for surface water takes come into effect in 2025.
- Retirement of groundwater consents and uptake of CPW water as part of CPW Stage 2 has a particularly important role in achieving the flow outcomes sought for the Selwyn River, Irwell and Hanmer Drain. Groundwater takes on the north side of the Selwyn River, inland from SH1, have more significant effects (including shorter lag times) on the Selwyn River system than any other part of the zone.
- The recent low groundwater levels from limited winter rainfall are increasing risks to achieving the ecological and cultural flows sought in the Selwyn River and the lowland streams.
- The recommendation of the Zone Committee to Environment Canterbury<sup>3</sup> was to continue to monitor and review progress towards achieving the ecological and cultural flows and the implementation of the package of actions. The first of the reviews is required next year - 2018 (5 years from date of the Zone Implementation Programme Addendum).
- The Committee's recommended was that if actions like the retirement of groundwater takes did not occur then Environment Canterbury was to look at revising down the allocation limits and/or reduce consented annual volumes on resource consents<sup>3</sup>.

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<sup>3</sup> Selwyn Waihora Zone Implementation Programme Addendum October 2013, page 8