

USING WATER FOR COMMUNITY BENEFIT

Canterbury's groundwater resource is being depleted as tens of thousands of litres of water a day are pumped out of the ground for irrigation. This is causing rural 'house wells' to run dry and the region's lowland streams (including the once world famous trout stream, the Selwyn River) to dry up at an alarming rate, with many no longer fit for fishing and other forms of recreation.

The proposed Central Plains Water irrigation scheme offers a solution to this predicament. It relies on the fact that central Canterbury is not short of water – it simply isn't in the right place at the right time.

The scheme involves channelling river water into an irrigation network and storing surplus flows in a reservoir. The storage reservoir is what makes Central Plains Water unique – it acts like a water bank that the scheme can draw upon to irrigate drought-prone farmland in the middle of summer. The water bank is also needed for periods when lack of rain in the Alps cause the Waimakariri and Rakaia to drop to low flow levels. At these times regulations stop irrigators from taking water because of the negative effect on river ecology, fishing and other water users.

Because it relies on river water, the scheme will protect central Canterbury's inland aquifer system. Up to 80% of farmers in the 60,000 hectare scheme area are Central Plains Water shareholders, meaning they are entitled to receive water if the scheme goes ahead, and of those, an estimated 50% currently pump water from underground aquifers. Because these farmers will instead have water delivered to their gate via the scheme's network of irrigation races, Central Plains Water will take significant pressure off the aquifers. Scientific studies indicate these will naturally replenish, some rising by up to 20m in parts of central Canterbury. The scheme will also result in increased flows in lowland streams like the Selwyn and the Irwell, which will return to more natural levels.

The scheme will not affect the ecology of the Waimakariri and the Rakaia rivers for the simple reason that no irrigator, Central Plains Water or otherwise, is permitted to draw water when river flows drop to minimum levels established by the Waimakariri Regional River Plan (developed by Environment Canterbury in 2004) and the Rakaia River National Water Conservation Order. The 'takes' that Central Plains Water has applied for are not continuous and simply represent the maximum amount of water the scheme could take at one time – the annual average take would only be 9 cubic metres per second (cumecs) from the Waimakariri and 4 from the Rakaia. This represents 4% of the rivers' combined average annual flow of 333 cumecs.

Unlike many older irrigation schemes, Central Plains Water will use water extremely efficiently. Not only will it store water for use during drought, farmers who receive water from the scheme must also commit to the scheme's Sustainable Management Agreement. This requires them to adopt best farming practices in relation to rates of water use, so as to best maintain and enhance healthy groundwater and stream systems.

Other than storage, the scheme's main point of difference is it delivers more than just irrigation. Community benefits will include population increases in rural districts that have struggled in the past to maintain school rolls and other local services, and the potential to adapt the scheme's waterways for recreational use. Walking and mountain biking tracks that follow the reservoir shoreline and canals are some of the options currently under consideration by the scheme designers, as well as building an artificial white-water kayaking course and kayaking on some sections of the

canals. There will also be opportunities for fishing, as well as boating, sailing and rowing on the 12km² storage lake.

The scheme will deliver a range of environmental benefits such as proposed 'vegetation corridors' that connect the pockets of native plants that remain on the central Canterbury Plains. These corridors will encourage the movement of native bird species and, ultimately, a permanent natural means of increasing native plant life on the plains, from the mountains to the sea. The scheme's Trust board will establish an Environmental Trust Fund amounting to around \$60,000 a year to fund environmental enhancement initiatives such as riparian planting and habitat restoration.

An irrigation scheme for central Canterbury was first proposed in 1883 so it's really a fluke of history that our region has not developed a system that harnesses and efficiently utilises its water resource for community benefit. North Canterbury has the Amuri and Waimakariri irrigation schemes, while the south has the Rangitata Diversion Race, Opuha, Lower Waitaki and Morven Glenavy schemes.

Recent resource consent applications by corporate dairy farmer Synlait and Ngai Tahu to take water from the Rakaia and Waimakariri respectively are evidence that if the water is not allocated to Central Plains Water, the regulatory process is such that it will simply be provided to another irrigator. The choice is therefore between ongoing, ad hoc distribution of water rights on a 'first come, first served' basis solely to irrigate individual or small groups of farms; or allocate it to a large scale, centrally managed, community-owned scheme that will also deliver environmental, economic and recreational benefits to the entire region.

Mounting construction and resource consenting costs mean the proposed Central Plains Water irrigation scheme is probably a one-off opportunity to deliver maximum benefits and to the greatest number of people.

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