Addressing Selwyn's water challenges

Water management is a subject that is dear to our hearts here in Selwyn. This has been demonstrated clearly not only by the high numbers of people turning out to our water seminar series this winter, but also by the community interest in the solutions being put forward to turn things around.

The state of our rivers, streams and Te Waihora/Lake Ellesmere leaves a lot to be desired. Many of us remember the halcyon days – not so many years ago – when we could swim in all of our rivers all summer. Today, water quality and quantity issues mean that we can't always do this, and that is cause for serious concern.

By understanding the issues, we can move on from attributing blame and into finding and implementing the appropriate resolutions.

The solutions outlined in this document, and in its partner booklet "Selwyn – Our Water Story", are just the beginning. There is a big package of work underway, but there will need to be further work done yet to fully address all the issues. Some parts of this 'Solutions Package' are not fully underway yet, such as working with our community and industry to build thousands of kilometres of effective riparian margins, constructing wetlands, and fully addressing the legacy phosphorus in the lake.

Funding, of course, is always high on the agenda, which is why we are delighted that all three of the Government's Freshwater Improvement Fund projects in Canterbury are in Selwyn Waihora. These projects have received $2.7 million of government funding, with a total cost of nearly $6 million.

This funding will create wetlands at Ahuriri Lagoon adjacent to Te Waihora, restore Snake Creek near Coes Ford, and introduce near river recharge of the Selwyn River/Waikirikiri.

Still, more will need to be done. Water issues in the Selwyn catchment will not be solved overnight or even in a decade. The task is inter-generational and it is critical that we all work together on solutions.

The Canterbury Water Management Strategy is all about communities doing just that. It is our hope that this seminar series has sparked interest and ideas in many of you, and we would welcome your involvement in your Selwyn Waihora Water Zone Committee.

If you missed any of the seminars you can view them online at ecan.govt.nz/selwyn-zone. There is also an in-depth collection of resources about Canterbury's water at Environment Canterbury's new water website, www.canterburywater.org.nz.

I'd like to thank you again for taking the time to look a little deeper into Selwyn's water issues.

Allen Lim
Chair, Selwyn Waihora Zone Committee, September 2017

Look a little deeper: **Connect with us**

canterburywater.org.nz
canterburywater.farm
ecan.govt.nz/water
ccc.govt.nz/water

selwyn.govt.nz
tewaihora.org/ourstories
ngaitahu.iwi.nz
Waihora Ellesmere Trust: wet.org.nz

Te Ara Kākāriki Greenway Canterbury Trust: kakariki.org.nz
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ecan.govt.nz. 0800 EC INFO or 0800 324 636

Canterbury Water

Selwyn's water
What's being done?

The Zone Committee's vision for the catchment:

To restore the mauri of Te Waihora while maintaining the prosperous land-based economy and thriving communities

Christchurch City Council
Selwyn District Council
Environment Canterbury Regional Council Kaunihera Taiao ki Waitaha

What's being done?

Check out some of the actions underway to improve water quality in the Selwyn catchment.

Farming:

Land use consents for farming. Around 900 farmers now need a land use consent to farm, which includes a Farm Environment Plan, addressing mahinga kai values and further nitrogen reductions into the future.

Reduced nitrogen losses. On farms with nitrogen losses over 15kg per hectare per year, reductions of between 5% (horticulture) and 30% (dairy) are required from 2022.

Farming at Good Management Practice and better. After gaining a land use consent, the farm will be regularly independently audited to ensure good management practices are being followed, and nitrogen limits and reductions are being met.

Stock exclusion. Stock access rules are tighter in Selwyn than elsewhere, including drains as well as other waterways, wetlands and lakes. Within the cultural area, further restrictions apply for wetlands and beds of lakes, rivers and drains.

Cultural:

Cultural Landscape Values Management Area. This designation reflects the significance of mahinga kai, wāhi tapu and wāhi taonga (sacred or treasured) sites, and places additional requirements on farmers to address these values.

Lake:

Lake solutions. Rehabilitating Te Waihora/Lake Ellesmere will require actions in and around the lake as well as managing the nutrient loads from the catchment.* Restoring the macrophyte beds in the lake and addressing the legacy phosphorus in the lake-bed silts will be particularly challenging. The following are underway:

- Macrophyte (aquatic plant) trials behind artificial wave barriers
- A floating wetland trial
- Using a nutrient model to explore ways to address the lake's phosphorus.

Biodiversity:

Immediate Steps biodiversity funding. The Selwyn Waihora Zone Committee supports on-the-ground biodiversity protection and restoration by allocating $100,000 per year of Immediate Steps biodiversity funding. Over $600,000 has already been allocated on a wide range of projects.

Hororata biodiversity corridor. More than a dozen areas of native vegetation including wetlands have been protected and restored in the Hororata catchment, creating biodiversity "stepping stones" from the top of the catchment.

Biodiversity plantouts. Te Ara Kākāriki, with support from many other organisations, plants large areas in natives to establish a green network from the foothills across the Plains to Te Waihora/Lake Ellesmere.

Springheads and wetlands. Protection and rehabilitation of some wetlands and springheads is underway so nutrients can be removed, enhancing native vegetation and protecting special species like mudfish.

Waterways:

Drains. There are over 370 kilometres of drains in the catchment, which play an essential drainage role and provide habitat for fish, as well as being a valued resource for mahinga kai. The CAREX project led by the University of Canterbury is looking at ways to manage drains that increase biodiversity, and reduce nutrients and nuisance aquatic plants while still fulfilling their drainage function.

Silverstream catchment. Silverstream joins the Selwyn River/Waikirikiri just above Coes Ford and is a major source of microbial contaminants at this swimming site. Environment Canterbury is working with landowners to identify and manage critical source areas along the streams and drains in the lower catchment, reducing run-off of sediment, phosphorus and microbial contaminants.

Snake Creek. Water and Wildlife Habitat Trust is leading the Snake Creek Restoration project to turn this 'drain' back into a living tributary that is once more an important trout spawning location.

Living Water. This 10-year Fonterra and DOC partnership is trialling how sustainable dairy farming and healthy freshwater ecosystems can exist side by side. The Ararira/LII River catchment is one of the Living Water sites, focusing on improving drains in the area.

Selwyn catchment:

Catchment nitrogen load limits. The Selwyn Te Waihora Water Plan sets tough limits for nitrogen losses:*

- From farming activities of 4,830 tonnes/year;
- From community sewerage systems of 62 tonnes/year;
- From industrial or trade processes of 152 tonnes/year.

Environment Canterbury is required to review this plan within the next decade.

Ahuriri Lagoon. A large wetland is to be constructed in Ahuriri Lagoon near Te Waihora / Lake Ellesmere, to strip nutrients from some of the water flowing to the lake.

Central Plains Water. CPW will irrigate up to 60,000 hectares of the Plains using water from Lake Coleridge and the Rakaia and Waimakariri Rivers. By replacing groundwater irrigation on half this land, it will leave more water in the groundwater "bath tub" and improve stream and river flows. In its first season, farmers who are now part of CPW Stage 1 reduced their groundwater takes by 75%.

CPW will result in more irrigated land use in the catchment, adding a small, temporary percentage increase to the nitrogen load. The Selwyn Te Waihora Water Plan addresses this by setting a load limit for CPW.

Supplementing flows. The main pipeline across the top of the Plains for the second stage of CPW will be built to allow water to be taken in a targeted way to supplement flows in the Selwyn River/ Waikirikiri. The water would be released into the gravels near the dry sections of the river and supplement flows at Coes Ford when the river is low.

New irrigation takes prohibited. The Selwyn Te Waihora Water Plan prohibits new irrigation takes.

Monitoring, compliance and enforcement. Environment Canterbury staff monitor over 1,400 consents each year, and more than 30 enforcement actions were taken in the first half of 2017.

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* Not all nitrogen losses from farming, community and industrial activities end up in the lake.