

The Selwyn Story – Farming with Nutrient Limits

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Introduction

In February 2014, Environment Canterbury announced Variation 1 of the Sub Regional Chapter of the Land and Water Regional Plan for the Selwyn/Waihora catchment. The plan change was the culmination of several years work overseen by a collaborative stakeholder group known as the Selwyn/Waihora Zone Committee. For farmers in the area there are significant challenges ahead, particularly for dairy farmers who will need to meet a Good Management Practise N loss number by 2017 and from 2022 may well need to make further nitrogen loss reductions of 30% beyond Good Management Practice.

My neighbourhood

I am a third generation dairy farmer on the farm that my Grandfather won a ballot for in 1929. So while the generations that have preceded me have now left us, I have over 80 years of institutional knowledge of the area we live and farm in. Te Waihora/Lake Ellesmere is approximately 6 km down stream of us and all the streams and drains that flow through and around us end up there.

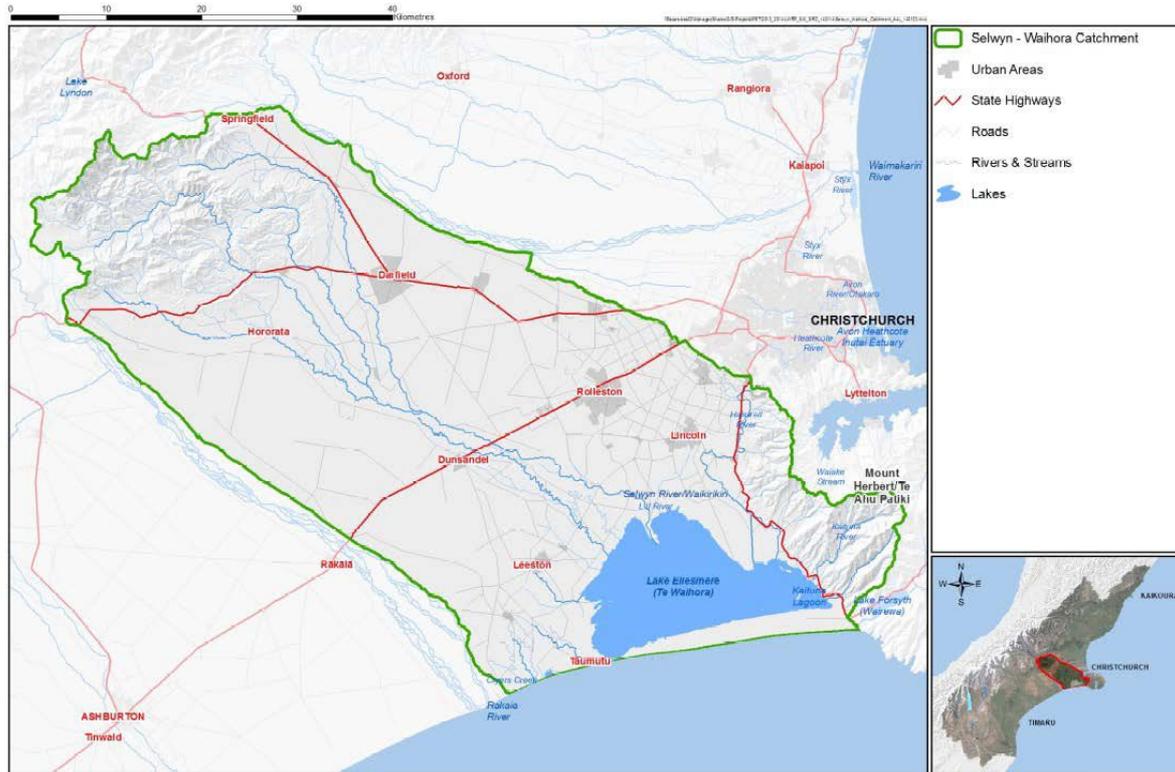
Boggy Creek bisects our farm and we have been actively involved with its restoration through removal of direct stock access, fencing of feeder streams and beginning riparian planting programme. The last few years have seen expenditure in excess of \$20,000 on further work fencing gully's, realigning paddocks and planting sediment traps and buffers to further reduce the losses from the farm to the receiving environment. We are on heavy denitrifying soils with our greatest risk to the environment being sediment, phosphorus and microbes.

I am chairman of the Leeston Rural Drainage Committee, a committee member of the Ellesmere Irrigation Society, practice as a St John paramedic having been a volunteer for over 30 years, Chair the local St John Area Committee, Chair GWSERP an expert review panel that signs off on the application of consent conditions for Central Plains Water, Chair of my local MP's election campaign committee, a bit of other politics and of course a member of the Selwyn/Waihora Zone Committee.

Given the paragraph above I used to once fish for salmon, trout and flounder and jet boat on the Rakaia River but I still have a very strong affinity for both the Rakaia River and Lake Ellesmere.

Catchment in context

The Selwyn/Waihora catchment lies just to the south of Christchurch between the Waimakariri and Rakaia Rivers. At the bottom of the catchment lies Te Waihora/Lake Ellesmere which is highly prized by Ngai Tahu, a Wahi Toanga, a source of both mahinga kai and mana, with multiple sites of Wahi Tapu and as a catchment engenders very strong Kaitiakitanga values or stewardship as well as being valued by the wider community for a range of uses including fishing, recreation and bird-watching. The idea of Kai uta ki tai, 'from the mountains to the sea', resonates strongly in that everything that happens in the catchment ultimately has an influence on the lake at the bottom.



Map showing the Selwyn Waihora project boundary (Source Environment Canterbury).

Nearly 90% of the catchment is in agriculture including 40% sheep and beef, 30% dairy (including dairy support) and 12% arable. There are approximately 210 dairy farms in the area, with larger than average herds (an average of approximately 730 cows) and higher than average production (an average of 1,260 kg MS/ha). Approximately 100,000 ha of land (about 45% of the agricultural area) in the catchment is irrigated of which a significant proportion is derived from groundwater. There is concern that groundwater abstraction has in recent years exceeded sustainable levels. Central Plains Water is a consented irrigation scheme currently being developed that has the potential to replace 30,000 ha of land irrigated through groundwater abstraction with surface water, and provide irrigation water for 30,000 ha of current dryland. There is therefore substantial potential for new conversions to dairy within the area.

In recent years there have been heightened concerns associated with the ecological condition of Lake Ellesmere/Te Waihora, the flows in the streams feeding it as well as with the elevated nutrient levels in streams and groundwater.

There is an important distinction among soil types within the Zone, with heavy soils closer to the lake which has been the traditional dairying area, and lighter stonier soils higher up the Plains where most of the recent conversions have taken place. These lighter soils tend to suffer higher nitrogen losses, but now support the majority of dairy farming within the Zone. It is expected that new conversions enabled through the development of Central Plains Water irrigation scheme would largely take place on these lighter soils.

Working collaboratively – getting involved in the Selwyn Waihora Zone Committee

Following decades of wrangling about water, in 2010 Canterbury Water Management Strategy was signed off by the region's Mayors. The advent of the Strategy was seen as a paradigm shift in the way in which water quality and quantity is managed in the region based upon a collaborative stakeholder approach used successfully in some other countries.

As a result, 10 zone committees were established across the Canterbury region and nominations were called for from the community, seeking people representative of the local community, to develop more detailed catchment based programmes.

The Zone Committee journey

The Committee comprises a range of representatives including

- Seven community representatives that broadly covered a range of environmental, farming, recreational interests;
- 6 runanga members;
- An Environment Canterbury Commissioner;
- An elected councillor from Selwyn District Council;
- An elected councillor from Christchurch City Council.

The Zone Committee's initial task was to understand where the catchment was at that point in time, culturally, environmentally, socially and economically and what the implications of those present day activities would be on the future. That is, the effects as yet unseen but effectively in the past, to arrive in ten, twenty or thirty years time.

At the same time we developed a feel for the community's aspirations for water in the area, taking into account social, economic, cultural and environmental considerations. One of the greatest challenges facing the zone was how to arrive at catchment limits for both water quality and quantity, which enabled economic development whilst improving the condition of the area's waterways particularly Lake Ellesmere/Te Waihora and weaving the values of Ngai Tahu into the ultimate plan. Strawman scenarios were developed and taken back to the community and ultimately through this process we landed at a point of balance between environmental and economic outcomes.

The Zone Committee embarked on a process informed by some of the country's top scientists to better understand some of the challenges facing the catchment, what was achievable and at what cost. Throughout the process there was a high level of community and stakeholder interest. Following much debate and an enormous number of meetings involving genuine consultation, we the Zone Committee recommend in September 2013 a package of measures to the Environment Canterbury Commissioners.

Environment Canterbury Commissioner Peter Skelton commented that:

"Achieving consensus on a package of solutions and a way forward is a real milestone in what is one of the most challenging water management catchments in the country. While

collaboration has presented challenges, it has allowed differing perspectives to be taken into account and gives us confidence that the solutions proposed by the zone committee will be enduring and acceptable”.

The package provided the basis for the statutory plan change, Variation 1, which Environment Canterbury has now notified to be scrutinised before hearing Commissioners in September. This is likely to involve various submitters contesting elements of the process and the science undertaken to date.

What are the implications for dairy farmers?

The plan is based upon the premise that all farmers must undertake good management practice by 2017. “Good practice” is being defined through a separate project led by Environment Canterbury and primary sector organisations, ‘The Matrix of Good Management’. However, it will be beyond 2017 where farmers will potentially have to face the greatest challenges. By 2022, the plan requires dairy farmers to make nitrogen loss reductions beyond good practice of 30%. Resource consents will be required for those farmers who cannot immediately reach these targets. This consent will in part articulate how they will achieve their nitrogen loss target expected of them by 2037, in effect their plan decided by them.

For those farms that have a low leaching profile on denitrifying soils there is the flexibility to further intensify up to a loss of 15kgN/ha/year but they will need to show that they are farming at the Good Management Practice level.

The plan will be supported by a range of other measures including requirements for farm environment plans, as well as a series of initiatives to improve the ecological health of the lake such as riparian planting, drain management, increased biodiversity and changes to the lake opening regime among other things.

Looking ahead

The Zone Committee’s focus now turns to ensuring that some of the catchment scale programmes such as wetland restoration, lake margin plantings and stream flow replenishment are implemented amongst the different stakeholders. There is no doubt that there remain many challenges ahead for farmers in the area, particularly for those required to make significant reductions in nitrogen leaching.

Personal reflections

Limits are about securing our future and meeting the goals and aspirations of the community around us.

The status quo or business as usual model does not provide us with a sustainable future.

Whether we are seeking to maintain our catchment economic output or further develop it we need to take our environment into account.

Increasingly National Policy Statements promoting outcomes and articulating frameworks are coming to a catchment near you. A negotiated outcome where the work is done up front with the best available information on the table will I believe provide the soundest solutions. There will never be a point where we have enough science to placate those who challenge the outcomes or wish to delay the process by way of further investigation.

The collaborative process relies on consensus and is achieved through the concept of 'gifting and gaining'. It is not a table for those bound by dogma and ideology or demanding of bottom lines, for ultimately the big prize is an outcome that we can all live and prosper with not the battles and skirmishes along the way.