

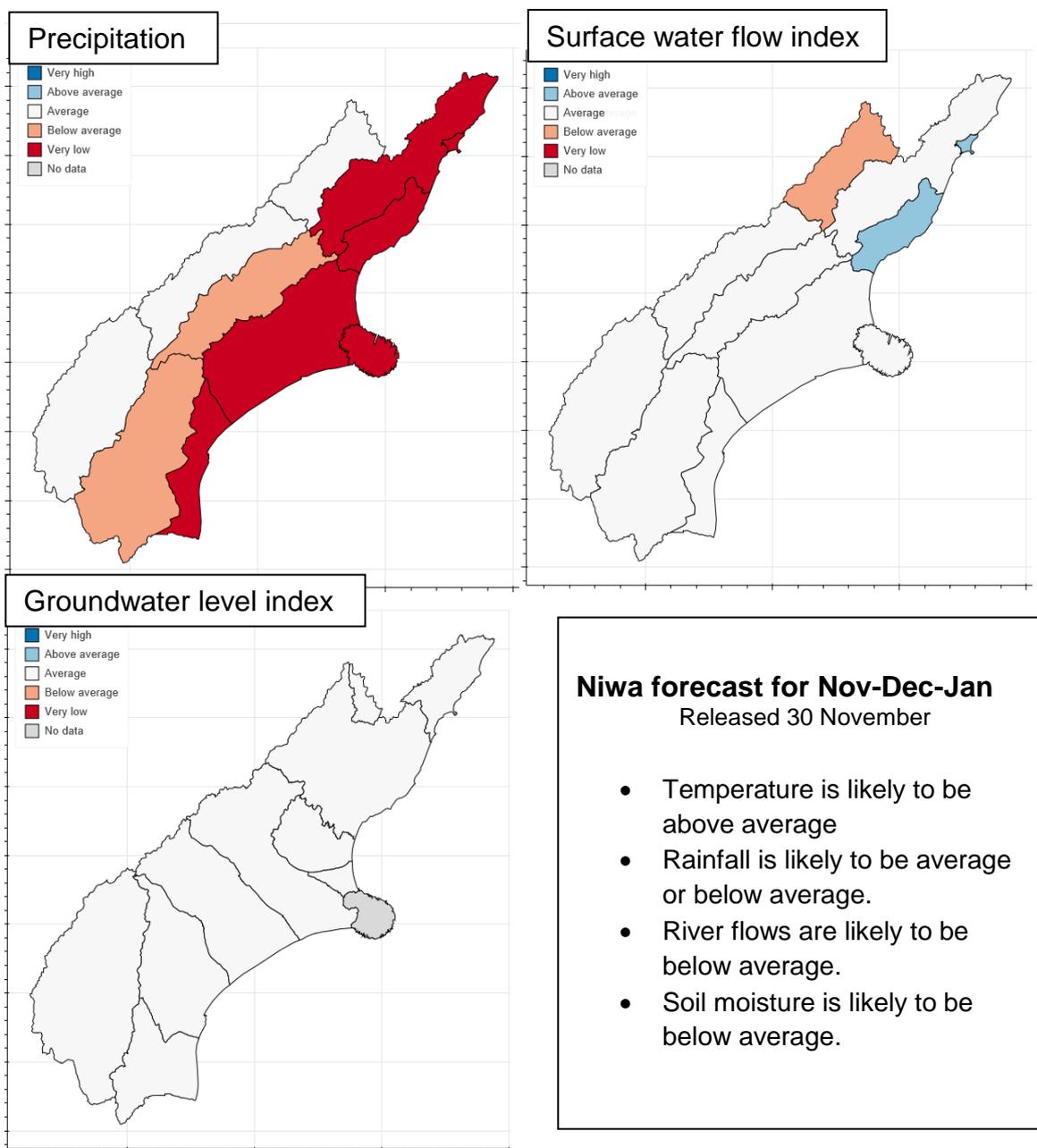
Canterbury Freshwater Quarterly Report 2017

Spring-Summer 2017-18

A report for Environment Canterbury Councillors. This report is prepared quarterly, and looks back and forward at significant freshwater management issues.

Monthly snapshots for November:

The maps below summarise rainfall, surface water flow, and groundwater levels in November. They are based on amalgamated data and give a good approximation of conditions across the region, measured on a five-point scale based on standard deviations. The rainfall and surface water flow maps are based on geographic and topographic conditions. The groundwater map reports by Canterbury Water Management Strategy zone.



High water demand as dry conditions take hold

Freshwater demand in Canterbury was high from late October because of declining soil moisture levels, caused by very dry conditions. The dry conditions have already featured in media stories in November and December.

Environment Canterbury is now receiving daily data updates from 97 per cent – by volume – of consented water use in Canterbury. The data is coming in from 4500 individual water takes through automated telemetry systems.

Surface take restrictions for irrigation

No monitored river sites went below their “minimum flow” (the level at which Environment Canterbury restricts takes to protect ecological values) during October. A small number of sites, however, came under restriction during November. More sites have come onto restriction in December as the dry spell lengthens.

The restrictions are posted daily on our website. Consent holders get daily text messages telling them whether their take is restricted or not.

Key messages for the farming and urban community

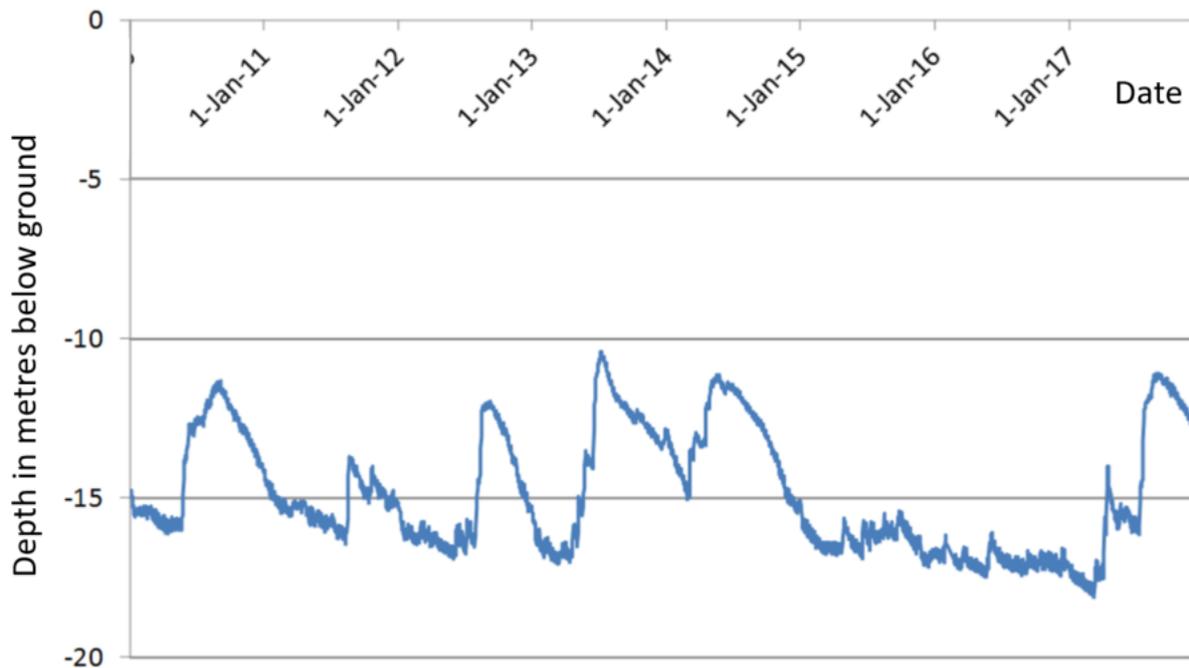
- Water consents are monitored to ensure sustainable use of the resource.
- Any misuse or breach of consent conditions, either detected or reported, will be dealt with through our compliance regime (written warning, abatement, infringement, prosecution).
- Farmers are urged to contact Environment Canterbury if they have an issue or a question around current or allowable water use.
- Irrigation will still be able to continue in many areas using water that doesn't deplete streams or rivers: e.g. water from storage (lakes or ponds), deep groundwater, or from alpine rivers.
- In urban areas water use is managed by the city or district council, subject to consents issued by Environment Canterbury. Residents are being encouraged to be careful with water use, particularly over the hot dry summer.

Groundwater levels and forecast

Groundwater levels have begun to drop after strong recharge over the winter. They remain at average levels for the time of year across most of Canterbury. Levels have now recovered even in most of the deeper wells in the upper Canterbury Plains, though they're also starting to be drawn down again by irrigation takes. Groundwater levels remain below average in the Waipara basin.

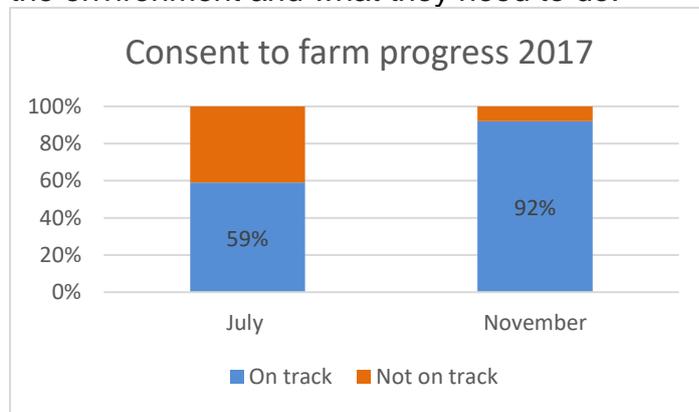
We expect that the healthy groundwater levels should last the summer, and flows in groundwater-fed streams should also be in good shape. However, this could change if the weather remains very dry and irrigation takes are high. See below for the plot of one of our monitoring wells which shows water levels since January 2010.

Groundwater levels, monitoring well on Miners Rd, West Melton



ZIP Delivery: progress in farming to limits

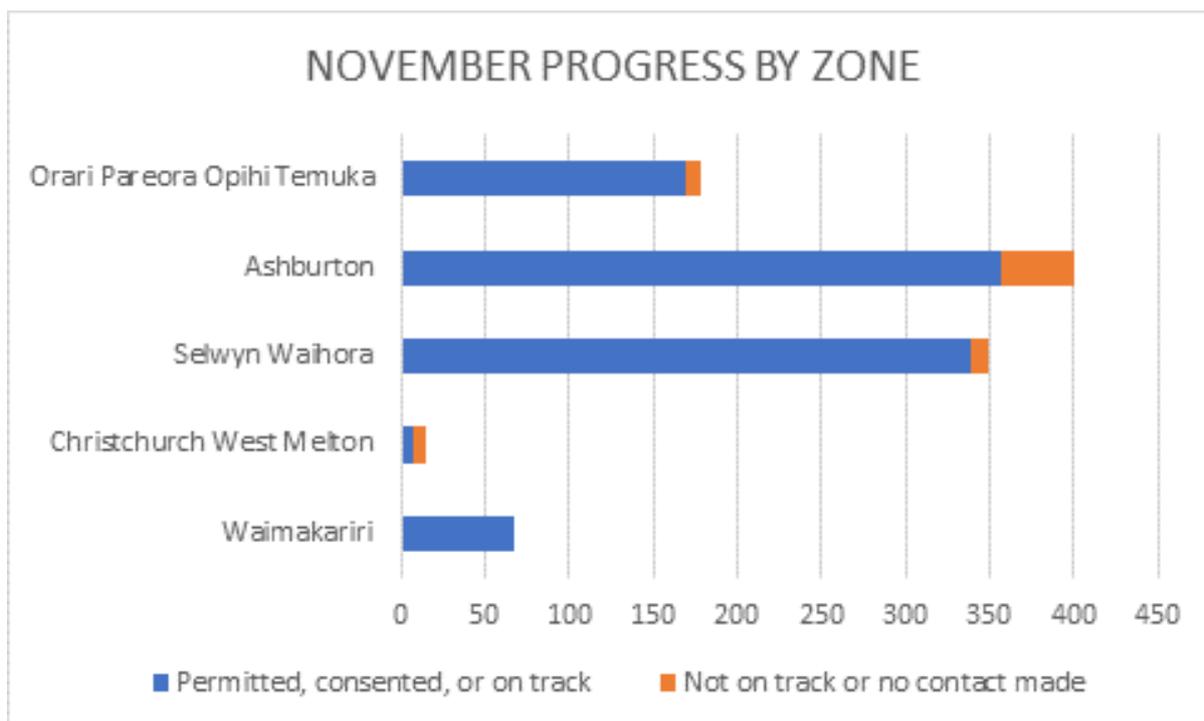
There has been a rigorous, targeted campaign this year, led by the zone teams across Canterbury, to ensure every farmer is aware of their responsibilities around the environment and what they need to do.



Of the 1000 or so farmers who currently require a consent to farm, 92 per cent were on-track by the end of November: i.e. they had a nitrogen budget or were on a wait-list to have one prepared. Some had also done their Farm Environment Plan. This compares with 59% on-track in July. In November, the outstanding 8% were either not on track, or no

contact had been made, despite our best efforts.

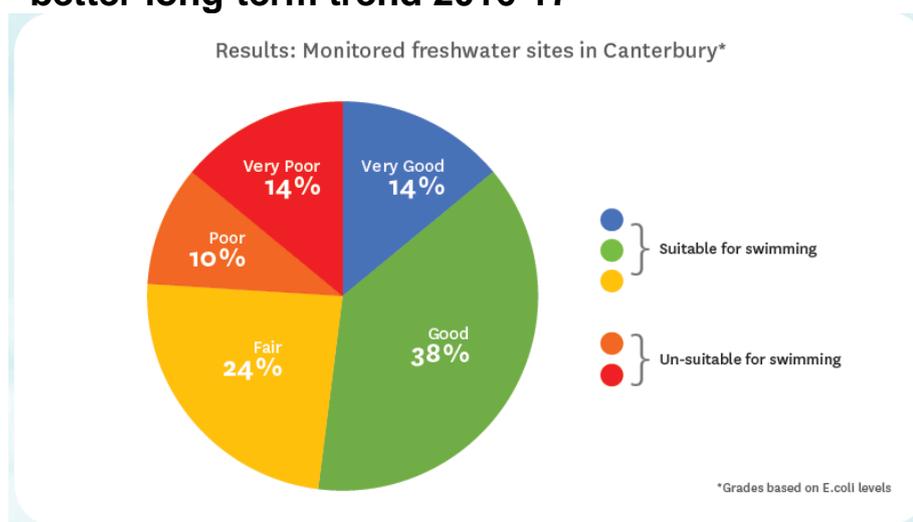
The work started in May with letters sent to farmers in five zones (Waimakariri, Christchurch West Melton, Selwyn, Ashburton and OTOPT-Timaru) reminding them of their consent to farm requirements under the Land & Water Regional Plan. Since then the zone teams, customer services, and other staff have been working to educate and encourage farmers to act. The graph below shows progress across the five zones – with Waimakariri having 100% of farmers on track.



Recreational water quality – better long-term trend 2016-17

The long-term (five year) water quality assessment – based on *E.Coli* risk – improved in the 2016-17 season:

- 76 per cent of the 52 freshwater sites were acceptable (very good, good, or fair).
- 12 sites improved.
- Four sites declined.
- In the previous season 68% of sites were acceptable.



The A-D grades are based on an assessment of the past five years data

E. coli/100 mL			
D >550	C 261-550	B 131-260	A ≤ 130
Poor	Fair	Good	Very good
Very Poor	(Ministry for the Environment & Ministry of Health, 2003)		

NZ River Awards – Pahau River wins top award

The [River of the Year](#) was awarded to North Canterbury's Pahau River. These awards – now run by the Cawthron Institute – have come a long way since their inception, and it is fantastic that a local river is recognised this year.

It is great to be able to celebrate success in this way, particularly given the size of the challenge we face. Progress is being made. This year's measurement was for *E-coli*.

There are others measures of progress and particularly pertinent was the comment by David Croft (Chair of the Pahau Enhancement Group) that it was the irrigation community that championed the change in *E-coli* levels and it will be the irrigation community that will lead the change in nitrogen levels. One success will lead to another.

Where can I swim? LAWA is the source of water quality truth

We are planning to promote, over summer, the new LAWA swim module. The new module will be launched before Christmas and will feature additional information and functions to make it easy for people to find out: **where can I swim?**

Environment Canterbury has commissioned five billboards around Christchurch, radio and cinema advertising as well as online advertising. Everything encourages people to visit www.lawa.org.nz/swim .

Our campaign starts in late December and will be supported by posts and information on our own Facebook pages (Environment Canterbury, Canterbury Water)

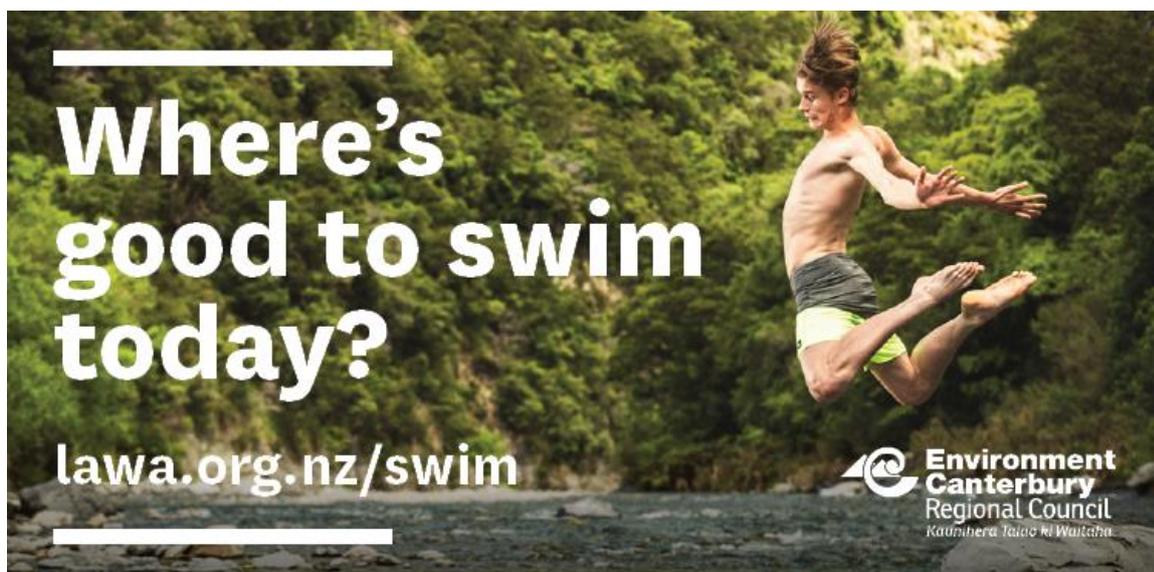


Figure 1 Five billboards around Christchurch will promote LAWA starting late December.