

This four-page insert is brought to you by Otago Regional Council.

Good Water in Otago – are you all good?

Otago Regional Council (ORC) recognises that no one knows your business better than you do. This is why you have choices and flexibility in how you manage your land, provided any rural runoff and discharges meet the Otago Water Plan rules.

The Otago community wants our environment to be the best in New Zealand, and while we can claim that many of our waterways already are, we want to keep them that way and make them even better. We need to work together to achieve this.

The water plan includes some new rules around the responsibility of landowners to manage the quality of water leaving their properties. So what does this mean for you?



TAKE THE FIRST STEPS!

We've listed the first steps you need to take on your way to meeting the new rules.

TICK WHEN COMPLETE

1. NUTRIENT BUDGET

The Otago Water Plan requires you to collect the information needed to run an Overseer® nutrient budget. This helps you identify how much nitrogen you could potentially leach to groundwater, which is important to know before the nitrogen limit rules become operative in 2020.

- Have you collected the information needed to run Overseer®?
- Have you completed a year-end actual nutrient budget using Overseer®?

If not, contact a Certified Nutrient Management Advisor (CNMA).

2. OBSERVE WHAT'S HAPPENING ON YOUR FARM

Do you have any rivers, creeks, or waterways running through or from your farm? If so, walk around the property to look for issues that could reduce water quality.

- Can stock access waterways?
- Has stock caused bank damage?

- Are there discharges from pipes or drains?
- Is there irrigation runoff or ponding?
- Is there runoff from wintering paddocks?
- Is there runoff from effluent application?
- Do you have natural or constructed wetlands that can act as filters and retain sediment on farm?

Think about what new management techniques you can introduce to improve



A farmer discusses the Otago Water Plan rules with ORC liaison specialist Nicole Foote.

the water quality, and chat with your industry representative for ideas.

3. WATER TESTING

Rivers/creeks, drains, ponds, and swales on your property can become degraded by activities on your land. You should look to understand what impact your land use is having on the quality of water leaving your property. Start regular water quality sampling so you can understand how your different land use patterns over the seasons impact on water quality.

Encourage your farming neighbours and friends to make a start too – working together allows you to learn from each other, share results, and helps to build your community. A number of catchment community groups already exist throughout Otago; you could look at joining one, or establish one if there is a need in your area.

For more information see the ORC booklet 'Sampling water quality on your farm', available on our website www.orc.govt.nz

ORC acknowledges the co-operation and assistance provided by the NZ Landcare Trust's Kakanui Community Catchment Project (KCCP) in preparing this checklist.

IN BRIEF

PLAN YOUR WATER USE FOR SUMMER 2016/17

With the irrigation season just around the corner, now is the time to plan how you will manage your water over the coming summer months. Otago's climate is one of the most diverse in New Zealand, with some of the driest parts in the country, so make sure your irrigation system is up to scratch to get you through the season. Our website will keep you up to date on river levels and also has great information on how to manage water during low flows. Visit www.orc.govt.nz

MINIMUM FLOW LEVEL DECISION FOR LINDIS RIVER

Otago Regional Council has accepted commissioners' recommendations that a minimum flow of 900 litres/second (surface water) be set for the Lindis River catchment to apply from the beginning of October until the end of May every year. The decision is part of a wider plan change (5A), which considers surface water, groundwater, catchment boundaries and water allocation volumes in the area. The decision noted that the recommended amendment was the most appropriate for achieving the Resource Management Act's purpose of promoting the sustainable

management of natural and physical resources, as well as the objectives of the National Policy Statement for Freshwater Management, and the Otago Water Plan, which it is proposed the new minimum flow forms part of.

LIAISON TEAM HERE TO HELP

ORC has liaison staff who are happy to talk through catchments' water quality issues. If you haven't met Bruce, James or Nicole yet and think they could add value to your next meeting, call us on 0800 474 082. You can also contact them if you have any queries about the Otago Water Plan and your activities. They are a great source of knowledge!

Keeping lakes and rivers clean for swimming

New Zealanders put a high value on being able to swim in their lakes and rivers. The water quality of Otago's freshwater lakes and rivers is among the highest in the country, and we want to keep it that way.

Our community has set the bar high by wanting our waterways to be of a swimmable standard. This is above the national standard set for waterways, which is for water quality to be at a minimum level of wadable. The Otago Water Plan aims to achieve the level of swimmable so those living in and visiting our region can enjoy the recreational options our lakes and rivers offer them. Not to mention making sure they are habitable for the plants and aquatic wildlife that call them home.

Otago Regional Council (ORC) carries out State of Environment (SOE) testing as part of a monthly monitoring programme and tests for concentrations of *E.coli*, which is a common measure to see if water is suitable for swimming. This bacteria, while generally not harmful in itself, indicates the presence of nasties such as faecal material and other potentially disease-causing organisms.

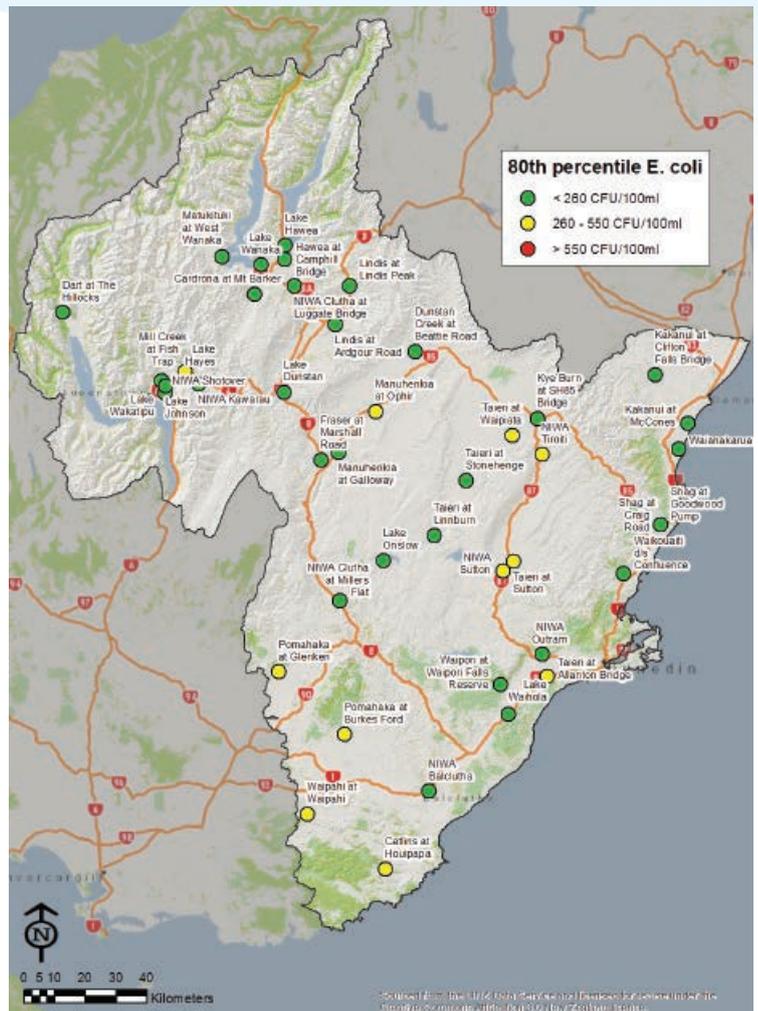
Our SOE sampling sites around Otago generally focus on areas at the bottom of catchments so we can make informed decisions around the water quality in the wider catchment area. However, we also monitor the larger rivers and streams that are popular for swimming.

The map on the right shows results from analysis of samples collected between 2010 and 2015. The samples were taken at or below median flow and are colour coded according to the swimmability guidelines set by the Ministry for the Environment and Ministry of Health.

Seventy-five percent of the identified swimming sites in Otago met the standards over the five year monitoring period as being very safe for swimming, and the remaining sites met the standards as being satisfactory for swimming. This is a good result, but shows there is room for improvement.

E.coli is one of the contaminants that landholders need to manage to comply with the Otago Water Plan. In 2020, water that leaves your property must meet the satisfactory standard for swimming (less than 550 *E.coli*/100ml at or below median flow).

We encourage all landholders to sample the waterways on their property to understand what the *E.coli* and other contaminant levels are. The sooner you start monitoring, the better you'll be able to understand what impact you may be having on waterways and how to manage this so you'll be compliant with the Water Plan come 2020.



Above: A map showing the average *E.coli* results at identified Otago swimming spots (2010–2015).

Mode	Freshwater <i>E.coli</i> /100ml
Surveillance – Green Should be very safe for swimming	No single sample greater than 260
Alert – Amber Should be satisfactory for swimming	One single sample between 261 and 550
Action – Red Could be health risk for swimming	One single sample greater than 550

Traffic-light guidelines showing water safety levels.



To find out about the water quality in the lakes and rivers near you, we recommend you look at the Land Air Water Aotearoa website:
lawa.org.nz



Momentum building to replace expiring mining privileges

It is great to see significant action being taken throughout Otago to replace old mining privileges (deemed permits) with water permits for taking of surface water. This transition is important for water users because under current legislation all mining privileges (deemed permits) expire in October 2021, which means that without a water permit in place by then you will no longer be able to take water, except for stock and domestic purposes.

We are seeing many people working together to form water management groups in order to have a group approach to renewing the deemed permits with water permits. With water users throughout 16 catchments already talking to Otago Regional Council (ORC) staff prior to lodging water permit applications, we can see strong community spirit and responsibility for water use evolving and continuing in the region.

The Sowburn Water Company Ltd (SWC) is a great example of a water management group established by the local community that worked collaboratively to replace 20 expiring mining privileges for taking of water from the Sow Burn in the Maniototo. Their replacement water permit allows greater flexibility of water use and self-management by SWC, which advantages all parties in the company. This is

an excellent example of the outcomes sought by the Otago Water Plan.

SWC chairman Gavan Herlihy says the impetus for forming the company came from a desire to resolve decades of dispute over the priority of water use from the Sow Burn.

This water management group has functioned highly effectively with little need for guidance from ORC.

“My best advice to any others with deemed permits is to start the process now, don’t delay, be very clear on what you want to achieve, challenge anyone who suggests work that you don’t think is necessary,” Mr Herlihy concluded.

Otago Fish and Game environmental officer Peter Wilson said that Fish and Game views the SWC consent process as a very important one, because it is the first example of a successful transfer from mining rights to a water permit in Otago completed by a water management group.

“This process shows the benefits of working in groups,” said Mr Wilson. “This water

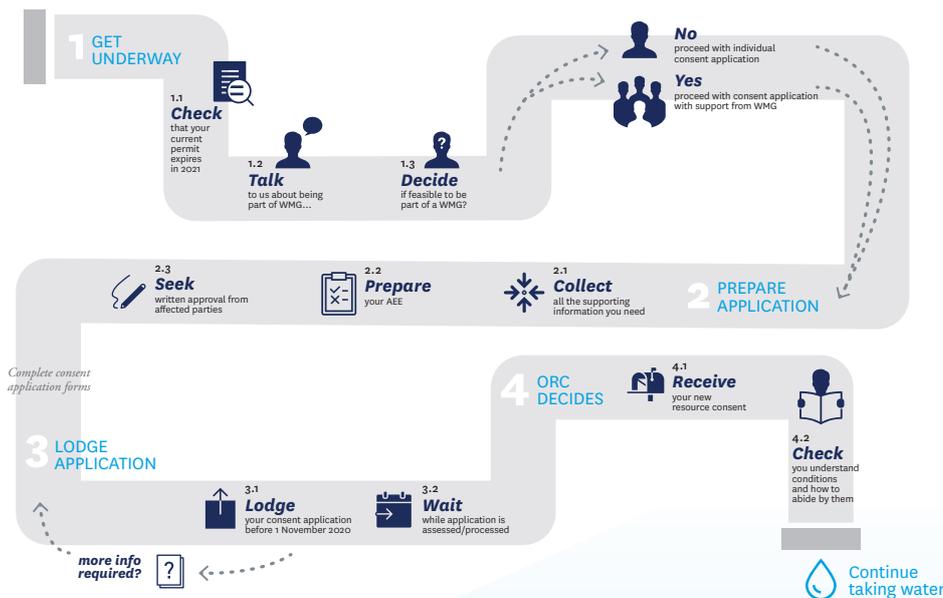
management group has functioned highly effectively with very little need of guidance from the ORC.”

A water management group is not the only way to transition your mining privilege to a water permit, however it is proving to be both effective and successful. A water management group can be anywhere from two members to more than 100, but needs to be a legal entity (i.e. a trust, a limited partnership, a limited liability company, an industrial and provident society, or a friendly society).

Within the water management group, users can either hold individual water permits within the group’s legal structure, or take water under a group permit. It is also possible to have a combination of individual and group-held water permits under a group umbrella to allow individuals to join the group at a later stage.

ORC has been briefing professionals such as lawyers, planners, and farm advisers on water quantity and allocation provisions in the Otago Water Plan, so they will be better placed to advise irrigators on how to set up an effective group.

If you want to find out more, phone us on 0800 474 082.



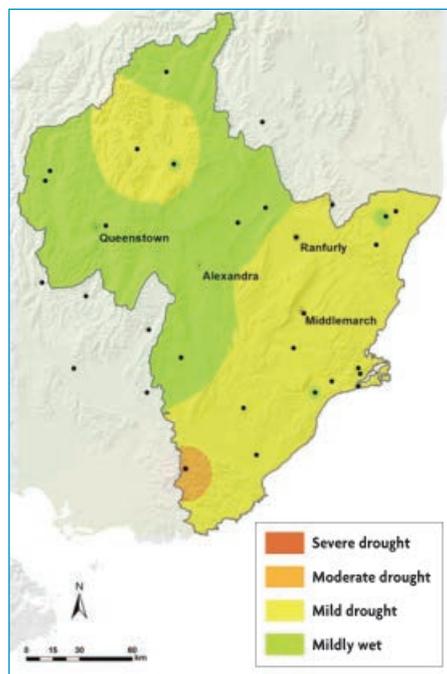
We had a dry year, but what lies ahead?

Otago water-takers can be congratulated for the responsible and collaborative way they handled an exceptionally dry year.

We have seen an extremely high number of users responding swiftly to both reduce the volume of water used, and to stop taking water at all when required. This has helped protect our waterway ecosystems and ensure water was still available for stock water and community drinking water supplies. Communities have done an outstanding job of adhering to minimum flows requirements, and sharing and rationing the water available.

With summer just around the corner, now is a good time for water users to plan and prepare for the year ahead. To do that, we first need to understand the impact the dry year has had on surface and groundwater levels so we know how the environment is set up for the coming year.

The six month period to the end of June 2016 showed mildly dry conditions over East Otago and near Wanaka, but mildly wet conditions over the remainder of Otago, as



Six-month Standardised Precipitation Index through the end of June 2016.



Summer picnics on the Taieri River near Outram.

shown in the figure below. Up until the end of July, river levels across most of Otago were above normal, however, groundwater levels for the same area were below average for the time of year, and are at a lower level than this time last year. A comparison of these can be seen in the table below, which shows all aquifers are slightly lower than the same time in 2015, but that the North Otago Volcanic Aquifer is up to 1.3 metres lower than this time last year. Note, numbers in red show water levels that are lower than the previous year.

Aquifer	Comparison to 2015 ground water levels (m)	Comparison to average ground water levels (m)
Lower Taieri	-0.30 to -0.60	0 to -0.25
Ettrick	-0.14	-0.80
Roxburgh	-1.02	+0.40
North Otago Volcanic	-1.30	-0.60
Waitaki Plains	-0.10	-0.25

Overall, June rainfall remained low over much of Otago and soil moisture levels in drought-affected areas are lower than normal, although parts of east and south Otago remain close to capacity, which may have implications for those looking to apply effluent to land as the dairy season kicks off.

Although the El Niño conditions have weakened, Otago Regional Council (ORC)

continues to monitor the impact of this weather event on Otago's rivers and aquifers, as well as local soil moisture levels. In NIWA's latest report, the El Niño weather pattern peaked last year, and it seems likely that we are moving into a La Niña scenario for the coming spring.

According to NIWA, La Niña conditions may again appear over the coming months (this will mean different things for different parts of Otago).

FOR EASTERN OTAGO:

- Temperatures are likely to be above average
- Rainfall is likely to be near or above normal
- River flows are likely to be below normal
- Soil moisture levels are likely to be below normal.

FOR INLAND OTAGO:

- Temperatures are likely to be above average
- Rainfall is likely to be near or above normal
- River flows are likely to be above normal
- Soil moisture levels are likely to be above normal.

You can access up-to-date information on river flows online at water.orc.govt.nz/waterinfo or from the ORC Flow Phone on 0800 426 463.