



Preston Hope stands on one of the small dams constructed by the 'old timers'.

## Old technology proves versatile

**Preston Hope reckons the old timers knew what they were doing when they created a vast network of dams and ponds in the country around the Strath Taieri area – but they probably weren't thinking about water quality.**

The dams were originally constructed to store water for stock during Central Otago's long dry summers and did a great job for the times. There were no water schemes back then. Probably using a bulldozer or suchlike, farmers would create a series of small dams in the numerous dry gullies across their landholdings. In those days fences were a luxury and paddock areas were vast, meaning stock had to fend for themselves to source water to drink.

Nowadays, many of these dams are still in existence and Preston has recognised their value in trapping

sediment and contaminant runoff from his property. And he can provide evidence to prove it.

Preston has a 1163ha farm near Sutton, just south of Middlemarch. It is big tough country, with wide open vistas, tussock, rock, plenty of wind, and snow in winter.

They run a low intensity sheep and beef farm with approximately 4000 Perendale sheep and 75 Angus cattle.

In the 17 years they have farmed the land, they have invested in subdividing off manageable paddocks and installed

reticulated stock water to most of the farm, which was no easy feat. The tough rocky terrain meant they had to employ a D6 bulldozer along with a large tractor tethered to the front to keep the bulldozer running straight as it mole-ploughed in the water lines.

Preston strongly believes that providing water troughs to his stock has paid off in terms of stock health and environmental benefits.

Stock also prefer drinking the clean, cool water from troughs; this has changed their behaviour within paddocks as they no longer walk so far,

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and don't congregate in camps next to waterways, which has the potential to cause contamination.

The original ponds were a risk to the farm as they could begin to dry up in summer, leaving deep muddy pools that were a death trap for stock.

Despite the ponds becoming redundant for stock drinking, Preston is grateful their ponds remain intact. The farm has 55 ponds across the property and all contain varying amounts of sediment that has accumulated over time.

In 2011, one of the larger ponds dried up and Preston took the opportunity to clean the sediment out. Around the same time, soil tests were being taken around the farm and, being of an enquiring mind, Preston decided to grab a sample of the sediment from the pond and send it off to the lab for analysis.

The results were surprising and, amongst other things, showed high levels of sulphur and phosphorus. This led Preston to consider the combined mitigating effect of the farms' 55 ponds in preventing sediment and contaminants from entering local rivers, and then the wider benefits spread across the Strath Taieri area.

The dams also create mini wetlands above each pond that help to filter out contaminants in the water, slow down flood flows, and provide habitat for birds and insects.

The old timers' ponds were unwittingly one of the best tools for ensuring good water quality in the area. What's that saying, "Don't throw the baby out with the bathwater..."

Other key positive environmental factors to Preston's operation include moving from full cultivation to direct drilling new pasture and crops, ditching the old Cambridge roller for a wheel roller that flattens rather than ridges the soil (preventing wind erosion), leaving wide buffers around waterways and steep areas, and retaining as much tussock as practicable for stock shelter.



ORC's chief executive, Sarah Gardner

## Introducing...

**ORC's new Chief Executive, Sarah Gardner, took over the helm at the end of January.**

She hadn't even been in the role for two weeks when we sat down to ask her some questions for Waterlines. She emphasised she doesn't want to throw out all the good work that's been done at ORC, and is looking forward to taking the organisation from good to great.

### ***Why did you want to work for ORC?***

I wanted to be in a position that's close to the community and I also want to make a difference, and this role lets me do that. The regions really are the backbone of New Zealand - whether you live in an urban or rural area, the contributions that regions make benefit New Zealand and all its people.

### ***What do you want to achieve here?***

I think regional government is hugely relevant in NZ. There are some difficult issues to tackle that we need to get sorted, such as water. We have choices to make about how we use it, so we can balance aspirations for economic growth while delivering environmental outcomes. Water was an issue when I started working in local government 20 years ago and it's still an issue now. We need to get it nailed.

I also want to ensure that ORC is working well with our communities and our stakeholders. People who live across the region have experiences and knowledge to draw on that is invaluable when it comes to finding the best solutions for some of our challenges. It's also important that we have relationships with all kinds of stakeholders in both our rural and urban environments, because working together enhances the quality of what we deliver and protect in Otago.

### ***What are your initial impressions of ORC and the staff who work here?***

I've had a very positive first impression. This organisation has a good heart. The staff are extremely capable, dedicated and care about their work.

Like anything, there are always opportunities to do something differently or to take different approaches, and we have to harness those opportunities and do what we can to service our communities in the best way.

***You've only been here for a short time, but is there anything you've seen that stands out as something you don't want to change?***

Our growing capability in civil defence and emergency management is developing well, and we're in a good place in terms of our ability to respond. This was evident with the recent fire in Dunedin followed by flooding that took place the following day. We were also able to assist West Coast with their response to extreme weather over several days.

I've also been impressed with our work on public transport and the hugely positive launch of the Orbus service in Queenstown. It was beyond expectations and shows great promise for the future.

### ***Does anything stand out as an area for improvement?***

It's early days of course so whatever I say now may not be what I learn over time. I would like to see if we can do things in a way that still ensures we make robust decisions but that takes less time. It's something I will have to look into further.

I would like to bring an increased iwi/Maori perspective into what ORC does. This needs to be done in a genuine way, such as staff learning to pronounce things like place names correctly - teaching people to roll their Rs shouldn't be too difficult down here! It would also be great if every staff member had their own mihi they could say, and if we all understood more about Maori tikanga and values.

### ***You're new to Otago. Do you see this as being an advantage or disadvantage in terms of leading an organisation that looks after the region's natural resources?***

At this stage it's a bit of both. It's a disadvantage because I'm still getting familiar with the area, so I'm getting out and about as much as possible. My peers from other councils and organisations have been really generous and are helping me get more familiar with different places, and are also introducing me to the people of the region.



Sarah Gardner being welcomed at Otakau marae

It's an advantage that I have fresh eyes and hopefully no unconscious bias. That freshness won't last forever, so I need to harness it and use it well. It's a huge privilege to have responsibilities in an amazing area like Otago.

In a previous role I dealt with communities where small children had elevated levels of chemicals in their blood due to the environment they were living in. Dealing with something like that teaches you very quickly that we're all humans no matter what the issue is, and that even though we have work to do, we shouldn't forget our empathy and the value of human kindness. That's something I bring with me into this role.

### ***What are your first impressions about Otago?***

When I told people I was coming to Dunedin to live, everyone said it's a great place. They also mentioned it can get cold...

I've had really positive first impressions. We are incredibly fortunate with what the environment offers in Otago. And the people are genuine, warm and engaging.

I also love the ten-minute commute in Dunedin - it saves so much time. And unlike in Sydney, I didn't have to wait for six weeks to get the internet connected in my house.

*Sarah comes to ORC from a role as Executive Director, Waste and Resource Recovery, for the New South Wales Environment Protection Authority.*

*Her career spans time in regional government, The Ministry for the Environment, and the New Zealand Environmental Protection Authority.*

# Summer swimming summary



Since the launch of the new the ‘Can I swim here’ area on the Land Air Water Aotearoa (LAWA) website, we’ve had a great response to people checking out Otago’s swimming spots.

The statistics tell the story, and we’ve had an almost 220% increase of people looking at the site when compared with last summer. It’s great to see more people knowing about the website, and going online to make sure the water quality in their favourite swimming spot is safe for a splash.

The sites viewed the most have been Lake Hayes at Mill Creek, Manuharekia at Shaky Bridge, and Brighton Beach.

There are only a few spots where cautions have been advised, and ORC is working with the community in a number of areas to improve water quality so all our lakes and rivers are safe to swim in.

## For our future: 2018-2028

Your opportunity to have your say on the ORC’s long-term plan is coming up soon.

In April we’ll be opening up submissions on our long-term plan, which outlines the ORC’s intended activities over the next 10 years.

The plan includes budgeting – and estimates of the impact on your rates bill. We’ll be consulting on ORC plans around climate change, low flow forecasting and urban water quality



– and updating you on some of our larger projects that are currently in process.

Look out for your consultation document, coming into your letterbox with your weekly community newspaper in early April for details of how to have your say.

## WATERWISE

Waterwise is a youth leadership programme. It involves secondary and tertiary students spending a week getting experience-based learning around education for sustainable development.

In December last year we hosted the students in the Waterwise programme for a day. A team of ORC staff members discussed our overall role in environmental management, and what’s involved in monitoring water quality and quantity.



ORC Environmental Officer Jono Young explaining how water flow is recorded

We also took them to a farm to get a farmer’s perspective on how water is used in a rural environment, and up Cardrona to learn about water use on a ski field.

It’s the third year we’ve been involved with this worthwhile initiative, and for the third year running we were pleasantly surprised at the level of interest from the students when it came to discussing the environment, water management, and the Resource Management Act.

They were a bright group who asked intelligent questions, and we feel privileged to be involved with this programme.

## A day in the life of...



The ORC customers services team from left are: Penny, Alysha, Cher and Shelby  
For this issue of Waterlines, Lisa Gloag spent time with the heart and soul of ORC – the awesome customer services team.



Chances are you’ve spoken with one of our customer services staff members, either in person, over the phone or via email. They are the first port of call for people contacting ORC, and know everything about everything that’s going on.

I’m lucky enough to see our lovely customer service ladies (as they like to refer to themselves) every working day. While they are the epitome of professionalism when handling queries from the public, from my insider’s perspective I can tell you that if you forget your swipe tag to get into the office, they politely request you to dance for them before they let you in. Please

don’t tell them I’ve forgotten my key on purpose just so I could break out the running man dance.

They were happy to have me sit quietly in the background and watch them at work for a few hours so I could write about them. I was impressed as they juggled phone calls, people popping in to deal with replacement bus cards, courier deliveries, keeping on top of email queries that constantly came in, and also answering questions from ORC staff. They take multi-tasking to a whole new level.

Cher Da-Rin is the team leader of customer services and has been at ORC for nine years. She started as a temp word processing operator and back-up receptionist. Her intention was to be here for six months while she took a break from being self-employed as a graphic artist, and she’s still here. Lucky for us!

Her team gets a number of queries about what ORC does, usually around rates time. Cher says this is because

a lot of people don’t realise there are five councils within Otago, with ORC covering the entire region and dealing with the region’s environment instead of more localised amenities.

She told me some of the more unusual queries her team has received. These two stood out as doozies:

- Someone once called to complain that \$90 for a pedicure is too expensive.
- Someone asked if they could use tea lights on the tables at their wedding reception even though there is a fire ban. I think this is a wise question, and unfortunately I don’t know the answer because they had to be referred to Otago Rural Fire Authority.

Patience and thick skin is needed for our customer services staff. They sometimes have to deal with irate customers, and Cher likes the challenge of turning angry people into happy people. She gets a lot of satisfaction from taking the time to

listen to their issue and answering their query or giving them the information they need. She believes a little caring goes a long way.

If anyone in her team has a tough customer, the others become instant cheerleaders to get a smile on their face again. Cher told me this is usually achieved by taking the mickey out of them – whatever works!

She said she loves that people who work for ORC are a dedicated team who do an amazing job to look after Otago’s environment (honest, she did say that, I’m not just doing a plug for ORC).

When she gets queries from people at rates time who question the value of what we do, she tells them that if we stopped doing what we do, people would notice pretty fast. She explains that a lot of what we do isn’t visible, but that she personally loves seeing how much we do for the money we have (seriously – Cher said this!).

You couldn’t ask for a better customer services team when that’s their view.

# Wallaby poo

ORC had our first stand at Southern Field Days this year and loved seeing the looks on people's faces when we offered them some wallaby 'poo' to sample.



ORC liaison specialist Nicole Foote discusses wallabies at Southern Field Days

Thankfully most people realised it was more likely there was a yummy treat in the bags (scorched almonds), and it was a good way to share a laugh. Wallabies weren't the only topic to chat about, with water takes, irrigation, rabbits and general queries also up for discussion.

Thanks to all those who came to say hi and tell us it was nice to see ORC at the field days. We'll definitely be back in 2020!



A demonstration of how to identify wallaby signs

## Where are the wallabies?

Did you know you need to report any sightings of wallabies or wallabies signs (e.g. footprints or scat) to ORC within two days of seeing them?

To make it easy, we have an online tool that allows you to map the location. You can even include GPS coordinates.

Knowing where people have seen wallabies means we can investigate the wider area and take action to stop this pest spreading further into Otago.

Head to [www.orc.govt.nz/wallabies](http://www.orc.govt.nz/wallabies) to have a look.



You can also download our guidebook (above) to help you identify wallabies.

We're also putting up signs around Otago in areas where wallabies or signs of wallabies have been seen, to remind people they need to report them to ORC on 0800 474 082.

# The Good Water Project

Last year in our annual plan consultation, we proposed undertaking environmental risk assessments on all rural properties, and lifestyle properties over two hectares in size. Here is an update on this project.



## Annual Plan Feedback

We received several submissions about the project in our 2017 annual plan consultation. They told us you want us to take our time so we do this project right, including having a pilot before we roll it out through the region. We've listened, and that's why you haven't met with us on your property yet, but we've been busy behind the scenes getting this project up and running.

We've been planning the project details and tendering for independent consultants to undertake the pilot and survey. Getting the water quality sampling underway and developing the information and materials that support the project.

## What happens next?

In the next couple of months, you may be contacted by a company called Versus Research. They are doing the survey for us. Please give them your views if they contact you; it will help us get a good understanding of the actions being taken around the region, the role catchment groups are playing in your community, and how likely you are as a community to need consent for the rules that commence in 2020.

Our desktop assessments are underway, and as soon as our new resources are ready we'll send these out, along with assessment letters, to relevant properties.

Our pilot of the onsite assessments will start in April/May and will focus on the Shag River catchment North Otago. If you live in this area, you'll hear from us soon.

We'll give you more updates as the Good Water Project is rolled out, so keep an eye on Waterlines, and if you haven't already, sign up to our monthly e-newsletter On-Stream by emailing [water@orc.govt.nz](mailto:water@orc.govt.nz)



## The Good Water Project (GWP) has two purposes:

1. To help people understand their risk when it comes to impacting on water quality and breaching rules in the Water Plan.
2. To enable ORC to understand what actions our rural and lifestyle block community are taking to ensure they are minimising negative effects on water quality.

## There are four parts to the Good Water Project

1. **A survey**  
The first is a survey to explore the readiness of our community for Water Plan rules that come into effect in 2020, or are in effect already. It will also explore how many of you are involved in catchment groups, and what actions you've been taking to improve water quality. It will also help us understand what the biggest barriers are that may be preventing you from minimising negative impacts on water quality.
2. **Desktop assessments**  
The second part is a desktop assessment for properties that we believe have a lower risk towards negatively affecting water quality. Those properties will generally be properties less than ten hectares in size, and undertake low intensity activities.
3. **On-site assessments**  
The third part is an on-site assessment for properties that are larger than ten hectares, or have a medium or high potential risk of impacting on water quality. These assessments will be face-to-face to help you fully understand how the Water Plan rules relate to you. We'll also ask you what information and support you need from ORC.
4. **Catchment water quality studies**  
The fourth part involves looking closely at the water quality within a catchment. We've started a focused study of water quality in five catchments around Otago to look at hotspots. These are Waiakeka Creek, Taieri River upstream of Waipiata, Thomsons Creek, Bannock Burn and Awamoko Stream. You may have seen our staff taking samples for analysis or already talked to our science team about the project in your area. Once we've analysed the data, we'll let you know what we've found.

# ORC's Summer Water Quality Monitoring

As many of us have dusted off our togs, snorkels and water-wings for the summer, here at ORC, occasionally we have to dust off our swim advisory signage.

When these warnings are in place it's important to avoid all contact with the water. As part of our water quality monitoring programme we take water quality samples from numerous sites around Otago and test for *E. coli* and Enterococci. In addition, we test for cyanobacteria at known hot-spots where high levels can occur.

The results of our weekly testing is published on LAWA's 'Can I Swim Here' website: [www.lawa.org.nz](http://www.lawa.org.nz) – so we recommend checking out their website before taking a dip!

## *E. coli* and Enterococci

The most common causes of the presence of *E. coli* in a river or lake is rural run-off, sewage, and stormwater. If the water looks murky, or there has been heavy rainfall in the previous 24 hours, the levels of enterococci and *E. coli* are likely to be higher.

When sampling freshwater for *E. coli* one of the challenges can be getting an accurate reading that is reflective of the whole water body. Sometimes high concentrations of *E. coli* may be present in one part of the lake, for example where there is a presence of bird effluent, while the rest of the lake might be fine to swim in.

When an unsafe level of *E. coli* is returned, in addition to placing swim warning signage at the site, we re-sample the water to determine if that bacteria is still present and may also carry out source testing.

## Cyanobacteria (toxic algae)

There are two species of the naturally occurring cyanobacteria which produce toxins that present a health risk to animals and humans – Anabaena and Phormidium. The presence of Anabaena can result in the water being bright green (a bit like pea soup), and the presence of surface scums or films. Whereas Phormidium forms black or dark brown slimy mats on the riverbed.

When a warning for cyanobacteria is in place, it is likely that the warning will continue for at least a couple of weeks. The cyanobacteria scums can be blown around by the wind, so parts of



Phormidium algae mat on the river bed (left), spots of Phormidium on gravel (right).



Anabaena: Thick accumulation of cyanobacteria at the water's edge, presence of thin scums in the centre (left), thick bloom of cyanobacteria (right).

the water body may look clear and safe to swim in, but toxins can persist after the bloom has dissipated.

Phormidium is particularly harmful to dogs, as it produces algal mats which can detach from the river bed and wash up at the water's edge. Many dogs are attracted by the musty smell of the mats and may eat them. The mats can be very poisonous – as toxic as cobra venom.

If your dog shows symptoms associated with consuming toxic algae, it's important that this is treated as an emergency and a vet is contacted immediately.

Signs that your dog might have consumed toxic algal material are lethargy, muscle tremors, fast breathing, salivation, twitching, paralysis and uncontrolled shaking, or frothing at the mouth.

There have been many cases in New Zealand of dog deaths associated with

toxic algae. So here's a few tips when walking your dog near a river or lake:

- Consider that there is the potential for the presence of small amounts of cyanobacteria in any river or lake.
- Keep an eye on your dog whenever they are near the water and ensure that your dog does not consume vegetation from the water's edge.
- The best way to protect your dog is to familiarise yourself with cyanobacteria by knowing what to look for. We've included a few pictures here, as a guide to help you spot different accumulations of cyanobacteria. Further information can be found on our website: <https://www.orc.govt.nz/managing-our-environment/biodiversity-and-pest-control/pest-control/toxic-algae>



## Check Clean Dry

### It's been a busy summer for our Check Clean Dry champions Stephanie Dwyer and Brooke Clark.

Stephanie and Brooke have covered many kilometres around the region, passing on some key reminders for the public to help prevent the spread of freshwater pests between waterways.

Lake snow and didymo can be spread through a single drop of water – so if swim gear, boats and equipment are kept clean the chances of these freshwater nasties spreading is greatly reduced.

Stephanie and Brooke say that in general they've struck a knowledgeable crowd with many boaties, swimmers and fishermen aware of the need to Check Clean Dry. However, many people were surprised to learn that freshwater pests can survive in a damp environment for up to two weeks! So it's extra important that items like wetsuits and swim gear are thoroughly dried between use.

*\*There are multiple ways to effectively clean your gear. For more information see MPI's Check Clean Dry at [www.mpi.govt.nz/travel-and-recreation/outdoor-activities/check-clean-dry/](http://www.mpi.govt.nz/travel-and-recreation/outdoor-activities/check-clean-dry/)*



At Challenge Wanaka, The Ruby swim event, and Macpac Motutapu a Decontamination Station was set up. Following the events participants can clean their swim gear at the Station.

One conscientious swimmer was so keen on keeping his gear clear of pests he jumped straight into our decontamination bin! While this may seem like an extreme action – it actually pays to keep absorbent materials such as wetsuits and lifejackets soaking for a few extra minutes to allow thorough saturation of the detergent.

### How to Check Clean Dry

- Check: Remove any plant matter from your gear and leave it at the site (the river or lake bank), or put it in the rubbish. Don't wash plant material down any drain.
- Clean: Soak or spray your gear for one minute using a five percent solution of dishwashing liquid with water.\*
- Dry: Ensure your gear is completely dry to touch, inside and out, then leave dry for at least another 48 hours before you use it.



# NZ Landcare Trust – Craig Simpson

**Craig Simpson, the Otago Regional Coordinator at NZ Landcare Trust, is a familiar face for many people at ORC.**

We work closely with him on a number of projects and had a chat with him to find out more about NZ Landcare Trust in Otago. The core objective of NZ Landcare Trust is to promote sustainable land and water management. The organisation operates in seven regions throughout NZ, including Otago.

Craig has a split role and is both the Regional Coordinator for NZ Landcare Trust, and the Project Coordinator for the Pathway for the Pomahaka project. The Masters in Water Resource Management that he completed in 2015 is being put to good use.

## Regional Coordinator

Craig has four main objectives in his regional coordinator role:

- Working to support the adoption of good management practices that will improve water quality
- Promoting and supporting catchment management, which involves providing support to catchment groups
- Providing support to landcare and community based environmental groups, including organisations such as DOC, schools and community groups
- Facilitating knowledge sharing and promoting innovative practices

A large part of his focus is working directly with farmers (and others) to help them understand the impact their land management practices can have on water quality, and helping them identify where they may be able to make changes.

## Pathway for the Pomahaka

This role involves connecting landowners and stakeholders in the catchment to identify issues and options to improve water quality in the catchment. It involves:

- Organising field days
- Writing and distributing newsletters
- Organising water testing rounds
- Conducting farmer surveys



"Don't wait for stuff to happen – be proactive with environmental protection and front foot it."

— Craig Simpson

- Producing material that promote good management practices, such as videos, posters, and media articles
- Organising farm environment plans to be completed in the catchment

Craig helped to get the project off the ground, and this year marks the third year it's been running. As the Pomahaka Water Care Group has geared up and become more active, Craig has moved to support the Group. His ultimate goal is to do his job so well that he does himself out of a job when the group is running well enough to do it themselves.

He's close to achieving his goal, as the group members have not only formed the Pomahaka Watercare Group, but also received independent funding through the Sustainable Farming Fund to start a new three-year project. They're likely to contract NZ Landcare Trust (i.e. Craig) with a new project to tackle the issue of water quality in the catchment from a different angle.

Craig believes the success of Pathway for the Pomahaka is due to farmers taking ownership and getting on board to make a difference. He said they're a committed bunch who give a lot of their own time and resources to drive the project, and he can't wait to see what else it will achieve in the next three years.

Advice from Craig:

- Get involved with a catchment group because you can talk with

people in your community to find solutions to local problems.

- Catchment groups offer a collective farming voice. If one person does something it only goes so far, but ten people doing something helps build momentum.
- Don't wait for stuff to happen – be proactive with environmental protection and front foot it. This means you can hang your hat up and know you've done a good job to protect the environment to the best of your ability.

Craig has a passion for the environment and making waterways healthy for the 'fishies' (as he calls them) that live in them.

He's able to make a difference through his job and lives by his favourite quote, which is, "Insanity: doing the same thing over and over again and expecting different results" – Albert Einstein.

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# What's up at ORC?

## Pest Plan progress

The Pest Plan outlines the plants and animals that have rules around how they are managed, and we're writing a new plan for Otago.

We had feedback from the community at the end of last year and are now doing a cost-benefit analysis for each species to make sure the benefits of managing it (including social costs) outweigh the costs of doing so.

This will help determine what ends up in the new plan so we can Protect our Patch from pests. The draft plan will be open for submissions later this year.



## Enviroschools

The Enviroschools programme empowers children to create more sustainable, healthy, caring environments and places for all to enjoy. Here's what schools around Otago have been up to.

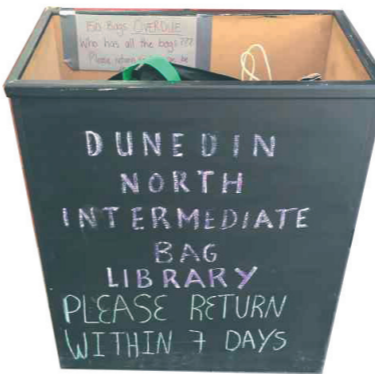
### Businesses changing their practice because of student action

Year two students at Queenstown Primary School spent a term looking at the damage plastic does in the environment. They organised a march down the Queenstown Mall to inform the public about the impact plastic is having on wildlife and organised a beach clean-up in Queenstown Bay.

They also wrote of their concerns about plastic straws to two local restaurant companies that own six bars and restaurants between them. This prompted the companies to make a number of changes, including moving to compostable straws. They are also reviewing their business practices to make sure they are making better environmental decisions.

### Getting reusable bags into the community

Many schools make re-usable bags. Dunedin North Intermediate has taken the idea a step further and set up a bag library in conjunction with the Gardens New World supermarket. A box for the bags sits at the main entrance of the supermarket. The bags have proven very popular and the school is trialling different methods to encourage people to return the bags.



## Thyme Festival

Five schools participated in the Enviroschools hub at the Thyme festival. Redesigning our world for less waste and learning about our local biodiversity were just two of the themes covered in three very busy days. Each school brought activities to share, including work on social justice, and reusable bags made from t-shirts.

## A makeover for Tomahawk Lagoon



ORC is helping the community build a vision for the future of Tomahawk Lagoon in Dunedin.

We've heard people talk about wanting to increase recreational activity in and around the lagoon, removing the housing and letting the lagoon return to a more natural state, enhancing its biodiversity and better managing the outlet opening, to those seeking it to be infilled to provide more land for housing or rural activities.

We're holding three workshops with the local community to develop a vision and potential projects for the lagoon so we can work together to agree on projects, and to create a great future for the lagoon.

Ecotago already runs science projects with local school students so they can learn about lagoon systems, how to test water quality, temperature, clarity and dissolved oxygen, and what the results mean.

This much-loved lagoon is home to a variety of bird life, and we are excited to be part of this project.

If you're interested in going to any of the workshops, please contact **ORC liaison specialist Nicole Foote on 0800 474 082.**

# Watch out rabbits!

**You will have seen in the media that ORC has had approval to release the K5 rabbit virus. Here's a copy of the media release we sent out. We'll keep you updated as we finalise details of the release.**

Land owners around Otago will be breathing a sigh of relief that the application to import and release a rabbit virus has been approved.

The RHDV1 K5 (K5) virus is a Korean variant of a strain that is already in New Zealand, and could reduce the rabbit population by over 40%.

Otago Regional Council (ORC) director environmental monitoring and operations Scott MacLean said the approval of K5 is good news for Otago.

"Rabbits are the number one pest in Otago," he said. "Ten rabbits can eat as much grass as one sheep. They are a threat to our biodiversity, not to mention the soil degradation and loss of soil caused by rabbit holes and warrens.

"The K5 virus, which only affects the European rabbit, may give us the opportunity to reduce rabbit numbers to the level where they are manageable. It will be especially beneficial in areas where traditional rabbit management methods are either not possible or not acceptable," Mr MacLean said.

ORC plans to release the virus in Otago in late March/April and is currently



monitoring rabbit numbers so they can give updates on how effective it is.

The virus will be spread nationally in a coordinated programme. There will be over 100 release sites in Otago and ORC will coordinate the release to make sure the K5 virus has maximum impact.

"We are really pleased that ORC will be funding this initiative, which will benefit all our ratepayers," Mr MacLean said.

"We have already identified the most strategic release sites in anticipation of the virus being approved, and are now getting ready to put the plan into action. These sites were selected based on science, to ensure we have the best chance of creating an epidemic and high knock-down rate."

The virus will be released in the form of a commercially-prepared product.

"We know farmers will be keen to get the virus released on their property, but we need people to be patient and trust us to do our job. Once we have more

detail, we plan to work in collaboration with land owners so we can all get the best outcome," Mr MacLean said.

"Rabbits will never be eradicated, and ongoing support from the community will be important to keep the rabbit numbers down after the virus starts to take effect.

"The virus is just one tool to help land owners manage rabbit populations, but it doesn't replace primary methods. In areas like Moeraki and Naseby, where traditional management methods are more challenging, the virus will definitely help," Mr MacLean said.

People need to make sure their pet rabbit vaccinations are up to date to protect against the K5 virus. Rabbit owners should discuss any concerns with their vet. No vaccinated pet rabbits in Australia, where the virus was released in 2017, have caught the K5 virus. *Keep an eye on the ORC website and Facebook page for the latest media releases and updates.*

## Have you signed up for On-Stream yet?

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Email us to sign up: [water@orc.govt.nz](mailto:water@orc.govt.nz)



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