

EnvirosOUTH

December 2021

Award winners

Recognising our environmental
champions

From page 6

Ahead of the curve

First consent for winter grazing

Page 20



environment
SOUTHLAND
REGIONAL COUNCIL

Te Taiao Tonga

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EnviroSOUTH

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Cover

◀ Murihiku Kai Collective member **Julz Orr (South Alive)** harvesting sweet chilli peppers at the Invercargill City Council winter gardens. The harvest supported the Collectives' Food Security mahi and the sweet chilli peppers were then offered to the public who visited South Alive the following day. The Murihiku Kai Collective was a winner at the Environment Southland Community Awards. **Story page 9.** (Photo: Cassandra Pokoney, Active Southland)



Our environment awards celebrated some amazing work and people.

The 25th annual Environment Southland Community Awards held at the end of October was a great celebration of environmental effort, commitment and achievement.

Our awards are the longest running in the regional council sector, in New Zealand. We, along with our fantastic sponsors, are always honoured to recognise Southland's environmental leaders and, is so often the case, our unsung heroes.

It is these people, and others like them, who have the vision and foresight to make a difference now for the future wellbeing of our region.

Their actions and contributions make Southland a better place for all of us.

Rob Phillips, Chief Executive, Environment Southland



It's time to take a hard look at our environmental challenges.

Southlanders tell us they want cleaner rivers and healthy ecosystems so we all can continue to swim, fish and practice mahinga kai.

Our science shows that for Southland to meet national standards for freshwater and provide for hauora – the health and wellbeing of waterbodies – we need to make significant reductions in contaminants – nitrogen, phosphorous, *E.coli* and sediment.

There's some great work going on, but we will all need to make changes of some sort, both urban and rural people, if we are to make a difference within a generation.

It's about a step-by-step approach and a focus on the next 10 years.

Take a look on our website to find out more and what you can do to help.

Nicol Horrell, Chairman, Environment Southland

Environment Southland

A thriving Southland – te taurikura o Murihiku

Students increase their litter intelligence

On a gorgeous day in September a group of high school students picked up and found out more about the litter that washes ashore, at the Greenpoint Domain in Bluff.

The community project was initiated by Southland Boys' High students, as part of the Career Navigator programme delivered by the Graeme Dingle Foundation Southern. They were also joined by a number of Sanford employees.

Environment Southland environmental education facilitator Josh Sullivan said it was a great opportunity for students to give back to the community, while also learning about citizen science and the role they can play.

"The students were impressive, they were totally engaged throughout the day and really keen to understand the waste they were collecting."

Once collected, the waste was methodically sorted and the data recorded in the Litter Intelligence database. Josh said the litter was largely a mix of glass, old ropes and plastic containers.

Career Navigator coordinator Ramari Paul says community projects provide rangatahi with opportunities to give back

to community and understand the value of their contributions.

"It was awesome to see the students' idea come to life and their engagement in the project."

The Career Navigator programme supports secondary school students to develop a purposeful pathway for their future using a combination of activity-based learning sessions, mentoring and site visits.

For more information visit www.dinglefoundation.org.nz



▲ Southland Boys' High School students Tama Ranui, Jackson Herrick, Josiah Tui and Isaiah Putt are proud of their efforts at Greenpoint Domain. (Photo: Graeme Dingle Foundation)

Making sense of complex data

The use of scientific modelling is becoming common in mainstream media to help us understand the Covid-19 situation and we're using it too, to explain Southland's efforts to improve water quality.



▲ **Ton Snelder**

Environment Southland's contracted modeller Dr Ton Snelder explains why modelling scientific information also plays an important role in Southland's efforts to improve water quality.

"Models are very important. We often hear people say that a model is not as good as the data we collect."

Ton says this isn't a practical contrast to make as models provide us with a way of making sense of vast amounts of data that have been collected. "It's a model because it's something we've built from the data we had available. All models are

basically trying to take the observations we make and use them to construct a representation of what it is we're seeing. And how that system we're seeing and observing, is working."

Models can be developed to help with understanding things that are simple as well as things that are very complex.

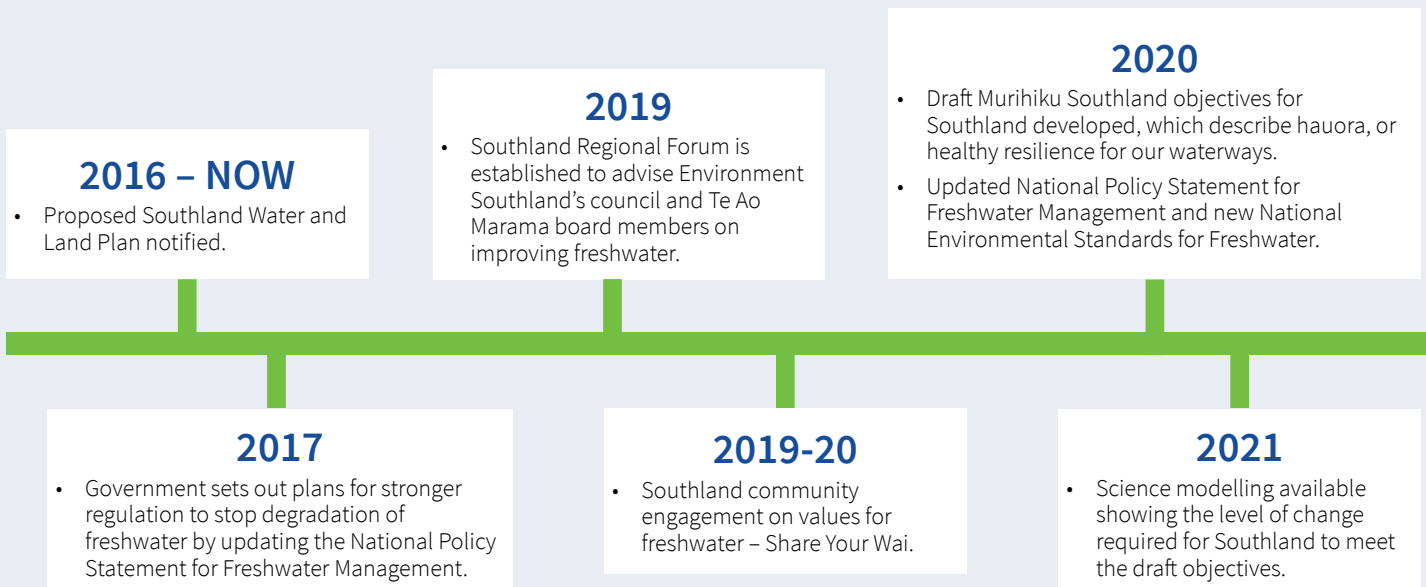
Ton says models are necessary to make sense of the world. "Data on its own is almost chaos. It's just numbers in spreadsheets – it takes a lot of work to extract meaning from what is otherwise almost indecipherable numerical chaos."

Ton has had a long history of working with regional councils and central government, and has been working with the team at Environment Southland since the first Regional Water Plan in the mid-1990s.

Hailing from Queenstown, Ton remembers coming to the 'big smoke' of Invercargill with his family for shopping and sports events. He originally wanted to be a farmer and studied agricultural engineering at Lincoln University. It was there that he became more interested in hydrology and pursued a Masters in this field at the University of New South Wales and then a PhD in environmental management at Lincoln.

Southland's freshwater process

Environment Southland and Te Ao Marama Incorporated (as the environmental arm of Ngāi Tahu Ki Murihiku), are working in partnership to develop a cohesive and practical plan for achieving hauora – the health and wellbeing of the region's water. This will result in a plan change to the current proposed Southland Water and Land Plan (2016) to include limits (for discharges to and abstractions from waterways) by 2025. Go to www.es.govt.nz to find out more.



Ton's early career at the Auckland Water Board focused on flood management and hydrology, but after joining the National Institute for Water and Atmospheric Research (NIWA), he became more involved in catchment modelling, looking at land use and water quality impacts.

"Obviously in New Zealand, agriculture is very much a part of that picture."

His work in Southland has provided a way of understanding the overall goals for water quality, and how far we have to go to reach them.

To build that understanding, models have been built using Southland data.

"In Southland we have taken the data we currently have, and modelled it to provide a better understanding of the likely reductions of contaminants needed in our various waterways," Ton says.

The data used in the models covers a range of areas including land use, characteristics of the catchments like rainfall and topography, and observations made in the river from sampling, like nutrient concentrations and periphyton levels.

"What our models are really doing is trying to describe the way in which contaminants (nitrogen, phosphorus, sediment and *E. coli*) are generated in those catchments, and how they're then transported down the

catchment, and what happens to them in the receiving environments – the estuaries."

"We build the models that describe the chain of events, and then once the models are built, they provide a simple representation of the whole system," Ton says. "We then interrogate that. We make sense of the data in the model, and then use it to say 'ah ha' – there's a level of response in the estuary that is unacceptable. What level would be acceptable, and what level of reduction in contaminants is needed to achieve that?"

This type of work has been done in New Zealand for over a decade in response to the need to set environmental limits.

"We recognise there are places around New Zealand, and Southland is an example, where we are generating more nutrients than what is acceptable and we need to reduce those.

"I've done work at the national scale on the current levels of nutrients, and how they compare with the regulatory criteria. From that work we knew that some regions in New Zealand, including Southland have quite large gaps between where they currently are and what's acceptable."

The models deployed in Southland and elsewhere around the country are the culmination of over three decades of research.

This science is another piece of the puzzle in Environment Southland's work programme focused on meeting the community's expectations and Government requirements for freshwater. The science programme has been running for over four years, and will combine with economic analysis to support a plan change to the proposed Southland Water and Land Plan in the next two years.

"One of the things that makes Southland quite unique is that it has these large, and very agriculturally-dominated catchments. Then those catchments finish in sensitive estuaries – sensitive to nutrient loads.

"You don't see that in many other places around New Zealand, and that does make Southland a challenging environment with respect to that combination of a productive agricultural landscape while achieving good environmental outcomes. That combination of things comes together in a challenging way."

WHAT IS MODELLING?

Scientific modelling aims to make a particular part or feature of the world easier to understand, define, quantify, visualize, or simulate by using data and observations. They can be used to explain, predict, and test, or to develop computer programmes or mathematical equations. We come into contact with models regularly in our daily lives, for example when we check the weather forecast.

2021-22

- Regional Forum continues to gather community input and consider science and economic information, to prepare advice on limits and actions.

2022-25

- Opportunities for community input on limits and actions.

2024-25

- Public submissions and review of plan by independent Freshwater Planning Panel.

Mid 2022

- Regional Forum presents advice to Environment Southland and Te Ao Marama.

2023

- Environment Southland and Te Ao Marama make decisions and release ('notify') plan change to Southland Water and Land Plan.

From 2025

- Develop action plans, measure and monitor progress.

Te Mana o te Wai – a foundation for our future

Te Mana o te Wai is a fundamental concept, elevated in status in the 2020 National Policy Statement for Freshwater Management. It is something each region has to define and determine how it will be achieved. Here's how Environment Southland and Te Ao Marama, in partnership, understand and are building towards it.

Te Mana o te Wai is a concept that is embedded in the way we manage freshwater in Murihiku Southland. It is part of our regional plan and the concept that underpins direction for looking after waterbodies across the country. Te Mana o te Wai is not a new concept, but it is one we need to become more familiar with.

The phrase Te Mana o te Wai refers to the status or standing of water, that it is deserving of our care and respect. Te Mana o te Wai encompasses protecting and restoring the mauri of waterbodies (the life force and life giving properties of water).

What Te Mana o te Wai means in practice is that our first responsibility is to our waterbodies, caring for them and respecting them in their own right.

Te Mana o te Wai is a shared responsibility and something we all need to understand and embrace whether we are living in urban or rural environments. Whenever we are interacting with land, with lakes, rivers, streams, wetlands, springs, groundwater, estuaries or connected coastal waters, we

must act in ways that support the health and well-being of waterbodies.

Over time waterbodies in our region have experienced significant degradation, particularly in lowland areas, aquifers and estuaries. This has impacted on the availability of fish, inaka/whitebait, puha and a variety of species that we enjoy eating and sharing with others. Our ability to safely drink water has been compromised. It is not always safe to swim where we would like to be able to get in the water. Water-based connections and practices are affected and at risk of being lost. Some of our highly valued native freshwater species are threatened with extinction.

By embracing the concept of Te Mana o te Wai, we can begin to turn around this history of degradation, to restore what we value. This is a primary focus for Environment Southland, working with tangata whenua, communities and stakeholders to identify methods to achieve widespread improvement in our waterbodies within a generation. Putting the needs of waterbodies first in all that we do is the key.



ENVIRONMENT SOUTHLAND
**COMMUNITY
AWARDS 2021**



CELEBRATING OUR
ENVIRONMENTAL
CHAMPIONS

The 2021 Environment Southland Community Awards celebrated 25 years on Friday 29 October at the Ascot Park Hotel in Invercargill.

The awards showcased the incredible work being done by the Southland community to improve our environment.

Congratulations to all the amazing finalists and the very special winners.



Above: MC – Liv Cochrane

Top right: Pre-dinner entertainment –
Maia Fletcher

Right: Environment Southland chairman –
Nicol Horrell



▲ Most Southland students enjoy a trip to Deep Cove for school camp and are treated to an amazing experience thanks to the nature guides programme.

COUNCILLORS' SPECIAL AWARD

WINNER – DEEP COVE NATURE GUIDES PROGRAMME

A visit to Deep Cove is a rite of passage for many Southland students but the trip is much more than just a school camp. For many, it is their first experience of nature in an up-close and personal way. This trip leaves a lasting impression and can develop a lifelong relationship with the environment. Thanks to a special partnership between the Deep Cove Outdoor Education Trust and Real Journeys, when students visit Deep Cove they get to experience this unique landscape with the help of a nature guide.

Real Journeys staff are trained as nature guides and accompany teachers and students into Deep Cove to help them explore the area and understand what is around them.

The nature guides programme ensures that students gain the most out of their experience and takes some of the pressure off schools to deliver education in an area that may not be their strength.

The judges were impressed with the sustainability of the programme

partnership and thought the nature guides programme made the Deep Cove experience completely unique for Southland children.

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**ENVIRONMENT SOUTHLAND
COUNCILLORS**





▲ Sheryll Ashton and Leigh McAulay from Invercargill City Council.

ENVIRONMENTAL ACTION IN THE COMMUNITY

WINNER – MURIHIKU KAI COLLECTIVE

The Murihiku Kai Collective consists of several community groups and individuals working together to ensure Southlanders have access to good food.

The judges were surprised by the depth of the group and said if their passion and enthusiasm were anything to go by, the project will be a roaring success.

It was formed after a Healthy Families study on the local food system highlighted concerns around access to affordable and

nutritious food. It also highlighted a lack of leadership within our community – and the need for a collective vision.

The collective is working in a range of areas to effect change, including with the Invercargill City Council parks and recreation team to increase edible plantings, an education space to create a wider understanding of how to grow food from seeds and intergenerational harvesting, and enabling community crop sharing through food pantries.

This project is truly a seed-to-plate initiative, and they understand that the strength of their group is the people that are involved and the amazing knowledge they bring with them.

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▲ Jesse Bythell.

INDIVIDUAL ENVIRONMENTAL ACTION OR LEADERSHIP

WINNER – JESSE BYTHELL

Jesse Bythell speaks for the trees.

Jesse works for the QEII National Trust, so is heavily involved with the environment in a work capacity, looking after 222 registered covenants.

However, it isn't only the work she does in her professional capacity that the judges were impressed with. Her dedication to environmental projects outside of her work really stood out. She has been on the New Zealand Plant Conservation Network

committee for almost 10 years and helps to run their website among many other things. In her limited spare time she has organised friends to go on weekend horse treks to clear wilding pines. She has also gained funding to develop a guide for others interested in undertaking similar treks, called the Conifer Cavalry.

She is credible, respected and enthusiastic and has an overwhelming impact on the communities she works with. She

understands the importance of connecting with landowners in their own space and that relationships formed are long-lasting ones.

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▲ Christine Liang (centre) and the SIT Microplastics Project team.

ENVIRONMENTAL ACTION IN EDUCATION

WINNER – SIT MICROPLASTICS PROJECT

With growing awareness of the dangers of microplastics, a group of SIT students and tutors decided to investigate the scale of the issue in Southland waterways.

The 2019 investigation into the number of microplastics was conducted in two Invercargill waterways. They found that 11 out of 16 samples showed a presence of microplastics with up to 25 particles. In 2020, this research was further developed and in the same two waterways up to 231 particles were found in a sample.

From these investigations the SIT Microplastics project has grown, with an aim of raising public awareness of microplastics.

This project has been driven by SIT's Environmental Management department, with strong collaboration with WasteNet Southland and Environment Southland.

They launched the Micro Investigators website and several schools have now completed stream studies and added to knowledge about microplastics and their impact on the natural habitat.

The judges described the project as quite remarkable, comprehensive, and they loved seeing the impact this research was having on the children, and how well they understood the issue.

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Department of
Conservation
Te Papa Atawhai



▲ Wendy and Leon Black.

ENVIRONMENTAL LEADERSHIP IN FARMING

WINNER – LEON AND WENDY BLACK

Leon and Wendy Black's sheep are setting a cool trend – with a 30% drop in methane emissions from their flock. The well-known couple own Blackdale Stud, a sheep farm at Ermedale, near Riverton, and their work in sheep genetics is gaining them national and international recognition.

Leon suggested that genetic options were worth considering when it came to reducing carbon emissions, and their work

in breeding low methane emitting sheep is now one of the only projects like it in the world.

They can prove a 30% drop in methane production from their main flock, while also reporting higher fleece and weight rates. The Blacks see it as an investment in the long term and the plan is to continue to breed lower and lower methane producing sheep.

The judges were struck by the innovation shown by the Black's in taking on a project like this. Leon's international connections were recognised, and the judges praised their influence within the farming community.

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WYNNWILLIAMS



▲ Members of the Ōreti Tōtara Dune Forests Trust, from left: Dallas Bradley, Jesse Bythell, Cathy Macfie and Maurice Rodway.

ENVIRONMENTAL ACTION IN BIODIVERSITY AND BIOSECURITY

WINNER – ŌRETI TŌTARA DUNE FOREST

The Ōreti Tōtara Dune Forest's rare ecological values are being protected for present and future generations to enjoy. The forest was purchased in 2020 following a huge fundraising effort by the trust set up to look after it. It comprises about 40ha of totara forest on dunes, with areas of ancient matai forest and patches of kahikatea, along with large old manuka and tī kōuka (cabbage trees), rising above extensive areas of mingimingi (coprosma).

The trust has undertaken an immense amount of work to restore the forest,

including temporary and permanent fencing to exclude livestock, reinstating wetlands, creating walking tracks, producing signage and pamphlets, building a carpark, introducing a pest and weed control plan and planting hundreds of key species to reinstate plants lost to grazing.

They have also created a management plan to ensure the ongoing future success of the forest. A QEII covenant application was approved in August.

The judges were very impressed in the initiative and organisation of this group. They also noted that they had set things up in a way that encouraged nature to do its own thing, which they really liked.

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▲ Riki Parata, Jo Brand and Mollie Lyders from Hokonui Rūnanga.

ENVIRONMENTAL ACTION IN WATER QUALITY IMPROVEMENT

WINNER – HOKONUI RŪNANGA

Hokonui Rūnanga's environmental arm is seriously impressive. The Hokonui Rūnanga Kaupapa Taiao programme started in December 2020. The purpose of this programme was to ensure the rūnanga increased capacity across the Mātaura catchment, with a focus on Mātauranga Māori. They identified a need to develop a specialist set of skills to support the delivery of their environmental projects and have recently gained funding from LINZ and DOC – Jobs for Nature.

One of their most established and well-known projects has been the restoration

of the low-lying areas on their property in Gore, into a series of connecting wetlands.

Other projects include, the Kōura breeding programme, and the Mataitai project in Mātaura, at New Zealand's first freshwater reserve, which involves monitoring the migration of Kanakana (eels) and trapping and transferring them upstream.

The rūnanga are now planning to tackle pest and weed control and restorative planting, and have established their own nursery.

The judges were impressed by the many different things the Hokonui Rūnanga were involved with and believed that the projects have had a long-lasting impact on water quality in their area.

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▲ John Schol and Tangaroa Walker.

ENVIRONMENTAL LEADERSHIP AND INNOVATION IN BUSINESS

WINNER – FARM 4 LIFE

Farm 4 Life recognised a serious problem within the dairy industry workforce in that 70% of the workforce were leaving after year one. They identified a lack of training, and that opportunities for further education and learning were often reserved for farm owners or managers. They wanted to see the right information passed from the “horse’s mouth to the gumboot”.

Tangaroa Walker and John Schol have worked together to create ‘The Hub’ as an innovative online solution. This platform

allows people to sign up to content carefully created by industry experts to educate and inspire best practice.

In conjunction with Dairy NZ, Farm 4 Life has created a series of videos dedicated to best wintering practices. This content is broken down into short videos that cover one to two learning points. After each video, those watching have their learning tracked through random quiz questions which ensures understanding.

The judges were really impressed with the use of innovative technology to solve an

industry-wide problem. Recognition of the multi-lingual workforce and plans for subtitles demonstrated the depth of their planning. The future-focused nature of the project stood out.

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ENVIRONMENTAL ACTION IN THE COMMUNITY

HIGHLY COMMENDED – AINSLEY ADAMS, MID ŌRETI CATCHMENT GROUP

The Mid Ōreti Catchment Group is led by Ainsley Adams, Rosie Forbes and Fiona Smith, with a strong committee behind them. The judges highlighted the unique dynamics of this group early on as they are a rural and urban catchment group, with Winton at their centre.

One of their major projects has been the restoration of Marshalls Creek. They have done a great job engaging the community and making their events open to everyone. They have been undertaking rapid habitat assessments, and noted that people get really excited about seeing what actually lives in the stream.

The judges noted they were a very well organised group. They were also really impressed to hear their employers supported them to undertake catchment work in their work time.



▲ Ainsley Adams.

ENVIRONMENTAL ACTION IN WATER QUALITY IMPROVEMENT

HIGHLY COMMENDED – APARIMA COMMUNITY ENVIRONMENT GROUP (ACE)

Aparima Community Environment (ACE) is a farmer-led group aiming to build environmental resilience. They want to start constructive conversations about the impact of farming practices and believe the secret to this has been to have those conversations on-farm.

ACE is unique in its scale and has big plans for the future. They want to raise community engagement around water quality issues and in year one undertook a Stream Walks project in each of their sub-catchments to drive engagement with their group.

The group has held seven stream walks to date, involving over 250 community members. Something that directly come out of the stream walk project has been a project between six farmers that will build a network of sediment traps on their farms.



▲ Bridgett Aitken, John White and Rachael Halder.

ENVIRONMENTAL LEADERSHIP AND INNOVATION IN BUSINESS

HIGHLY COMMENDED – THE BATCH CAFÉ

Café owners Gareth Hamilton and Kate French have moved to BioPack packaging and started composting their own packaging on Hamilton’s property. They have upscaled their collection points and now have eight community sites as well as taking waste from another local café.

They are composting more than 350 cups per week as well as other food packaging.

With multiple worm compost bins established, demand is now beginning to outgrow their current set-up so Gareth has built a prototype of a six metre long composting tumbling tunnel. The compost created is utilised on The Batch Garden, which produces seasonal produce for the café.

The judges were pleased to see them sharing their concept with other café owners and thought this project had the potential to be scaled up and go a long way.



▲ Gareth Hamilton and Kate French.

Environment Southland Community Awards Finalists

Environmental Action in Education

- Aurora College Sustainable Garden
- Deep Cove Nature Guides Programme
- Halfmoon Bay School
- Hedgehope School
- Janet de Wagt
- Limehills School - LHGen2
- SIT Microplastics Project
- NZ Marine Studies Centre – University of Otago

Individual Environmental Action or leadership

- Barry Smith
- Dave Diprose
- Grant McGregor
- Jesse Bythell

Environmental Action in the Community

- Ainsley Adams - Mid Ōreti Catchment Group
- Aparima College - School and Community Garden
- Murihiku Kai Collective
- Lumsden School Bike Project
- Reforest Northern Southland

Environmental Action in Water Quality Improvement

- Aparima Community Environment (ACE) Group
- Luke Templeton
- Sunrise Rotary Club
- Hokonui Rūnanga

Environmental Leadership and Innovation in Business

- The Batch Café
- Farm 4 Life
- Highways South
- Land & Water Science
- Wairaurahiri Jet

Environmental Action in Biodiversity and Biosecurity

- Ōreti Tōtara Dune Forest
- Otatara Pestbusters
- Ruapuke Uncut

Environmental Leadership in Farming

- John Cowie
- Leon and Wendy Black

Finding the right b

It was the good farmland for a good price, and the proximity to a town, that originally brought Bernadette Hunt and her husband to Southland. But it is the community spirit that has made it home.

Bernadette was in Waikato when she met her husband Alistair (originally from England) while at teacher's college, and they started looking for farms in areas where Bernadette could also get a teaching job.

"Friends of ours lived and farmed in Southland. The land values were a lot lower at the time than where we lived in the Waikato and we decided on this farm in Eastern Southland."

The couple run sheep and beef. Rather than breeding the animals themselves, they purchase partially grown stock from others and grow them to their meat potential – not everyone has the type of ground and grass to be able to do this, but their farm was set up specifically for growing animals. They also grow arable crops, and offer an agricultural contracting service.

Bernadette is currently vice president of Southland Federated Farmers, president of the local gymnastics club, and on the Southland Regional Forum.

"Volunteering is in my blood and it's big in Gore. That's one of the reasons we love it here – it's a great place to farm and raise a family.

"What's special is the community spirit. When things are tough it draws people together – like with last year's February floods and Covid-19 – we all got stuck in to make sure people were supported."

Bernadette became involved with Federated Farmers because she wanted to understand the water and land planning process.

Some years later, she put her hand up to be part of the Southland Regional Forum, which is tasked with coming up with recommendations for Environment Southland and Te Ao Marama Inc on how

to meet the region's freshwater objectives.

"I had some knowledge to bring to the table. I've done a lot to try and help non-farming people understand life from a farming perspective."

Balancing people's expectations is the biggest challenge for the Regional Forum.

"The climate and soil is great for growing; Southland is a great place to farm. It's hard to put the brakes on when you can see the potential. But there are costs, and not just financial. There will need to be a new way of looking at things into the future. In the past, success was measured by how much land you drained or fenced, or how much milk solids or wool was produced. We're going to have to define success differently,

balancing sustainability into the future with the livelihoods of people now."

The Regional Forum is made up of people from all over the community, with different values, backgrounds and interests, drawn together to try and weigh all these things up and find a way forward that will work.

"I want to find a way to balance all this – so my kids' generation and those after them can still farm productively and profitably. We produce amazing food products in Southland and I would hope that that is still going on for the next generation.

"Hopefully [by then] we've found a way to balance so we can be proud of what we produce, in the knowledge that we're not taking more than there is to take."



▲ Bernadette Hunt

alance

THE SOUTHLAND REGIONAL FORUM

The Southland Regional Forum is a community-based group set up to advise Environment Southland's council and Te Ao Marama board members on how we can achieve the communities' aspirations for freshwater.

Members of the forum are considering the specific policies as well as the on-ground initiatives required to make change and improve Southland's water and land for generations to come.

The forum was set up in 2019 and there have been 15 workshops taking place all

around the region to date, with another happening this month (December). Forum members have been working to build their understanding of Southland's water quality and quantity challenges through reports, presentations, and field trips regarding cultural, science, economic, social, and planning considerations.

They have heard from many key stakeholders – including Ngai Tahu, different hapu in the area, Fonterra, Ballance agri-nutrients, Deer Industry NZ, Beef + Lamb NZ, Fish & Game, Dairy NZ,

the city and district councils, and schools among others.

The forum has now begun the process of distilling this information and creating a pathway for the future in the form of drafting recommendations. The advice will be presented mid-2022.

For more information, visit www.facebook.com/RegionalForum, or search for Regional Forum on the Environment Southland website es.govt.nz.



▲ Southland Regional Forum members

Getting a head start on winter grazing

Dairy Holdings Limited is the first farming operation to be granted a winter grazing consent in Southland, which is unsurprising, given the company likes to stay ahead of the curve.

Chief executive Colin Glass says a pro-active strategy to ensure the company's operations are set up for the future is crucial and gives the company certainty.

"Our planning is always 12 months in advance. We try to be ahead of the curve."

As a New Zealand majority owned and operated company, the operation comprises 60 dairy farms, producing 17 million kilograms of milk solids from 50,000 cows.

With all of its assets in the South Island, there are nine farms and one larger support block in Southland, mainly in the Gore-Mandeville area of the Waimea Valley, with another property north of Winton.

As a big player with a big footprint, they want to ensure consistency of practice across their farms.

The consent was granted to Dairy Holdings Limited for their winter grazing activities with a series of conditions to ensure the best outcomes for water quality.

All of Dairy Holdings' farms are self-contained, meaning they don't send stock away to graze on someone else's property. Across the South Island they include 20 support farms that provide for the rearing and supply of 13,500 in-calf heifers each year to the dairy farms and grazing of all non-lactating cows during the winter months.

Although computer modelling shows wintering has the most potential for nutrient loss, it is a necessary part of the business.

"While farmers might be able to choose to winter-off in another area, all that does is transfer the issues," says Colin.

"We take full responsibility for the grazing blocks as well as the dairy farms."

Dairy Holdings owns, leases and controls the farms that supply all its pasture feed requirements.

"This enables our operations to be New Zealand's pastoral environmental and animal husbandry leader."

Careful planning of how and where stock is winter grazed is important as it helps to reduce negative impacts on waterways and animal health.

Colin says what was regarded as good practice in the past is now the minimum requirement.

Wintering strategies include growing more fodder beet, a lower nitrogen feed, which has a similar nitrogen level to kale, but the crop yield is double.

Catch crops are planted after winter feed crops, including oats and kale, to take up nitrogen left in the soil so it's used up by plants rather than picked up by rainfall to travel to rivers or groundwater.

These and other mitigations also lead to reductions in phosphorus, sediment and *E. coli* getting into streams, rivers and estuaries.

Changes to national legislation around water quality had given the company more impetus around the planning and the path it was already heading down, he says.

"We recognised the need to account for our footprint some years ago."

Dairy Holdings has been reducing its nutrient application rates for several years and was confident it would be within limits and therefore comply with the new regulations.



It had taken the lessons from the limit-setting process in Canterbury, which put it in a good place to be able to approach the process in Southland, he says.

"What was regarded as good practice in the past is now the minimum requirement."

COLIN GLASS

With consents in place in Canterbury in 2017, the company had now been through three or four audits of its farms there.

A lot of dairy operations were on the same journey and everyone's experiences were different and reflective of their own farming systems.

Dairy Holdings did not put its head up as some kind of gold standard, "we're just realistic", says Colin.

"We acknowledge that some reductions in future will be required. We've now started that journey in Southland and it's positive to be ahead of the game."

▼ Colin Glass



WINTER GRAZING CONSENTS

By **JADE MCRAE**, *Environment Southland senior consents officer*

Dairy Holdings Ltd knows what is needed on its Southland farms and is doing it – and its winter grazing consent gives it certainty for the next 10 years.

The company submitted its consent application before the National Environmental Standards for Freshwater (NES) was announced – the NES landed halfway through the process.

They knew the limitations of their farms and what was needed, and put a lot of time and effort into fixing areas on farm that could have become an environmental issue.

By mid-October Environment Southland had received three consent applications for intensive winter grazing, most of which related to large scale farming operations.

They indicated they were getting organised early and preparing their businesses in the knowledge of the likely changes ahead.

Environment Southland has developed a series of online tools to support farmers planning for next season's cultivation and winter grazing requirements.

The tools include a cultivation and intensive winter grazing mapping tool; short YouTube videos demonstrating good practice; a permitted activity checklist and registration process; and an online resource consent application process.

For advice on your winter grazing consent, get in touch with the consents team on 0800 76 88 45.

Updates



SHARE THE LAKE

Boaties in Te Anau and Manapouri are being reminded they need to share the lake with other users, as they head out over summer.

An increasing number of open water swimmers has meant a few close calls with boats in the lakes and harbourmaster Lyndon Cleaver says it's important boaties are extra vigilant.

Skippers have a responsibility to keep a lookout and must obey the 5 knot rule within 200 metres of the shore and not exceed 5 knots within 50 metres of a swimmer or other person in the water.

Boaties are also reminded to ensure they know the navigation safety rules. Our harbourmaster team will be out and about over summer, partnering with Maritime New Zealand, as part of the 'No Excuses' campaign, which is aimed at deterring those boaties who choose to break the rules.

CAN I SWIM
HERE?



www.lawa.org.nz

LAWA
LAND AIR WATER AOTEAROA

CHECK BEFORE YOU SWIM

Environment Southland checks for *E. coli* and faecal coliforms at our river and lake sites, and enterococci at our beach and estuaries through its summer water sampling programme. These bacteria can make people sick, so check the latest results on the Land, Air, Water Aotearoa (LAWA) website – www.lawa.org.nz – before diving in.

Results of the sampling aren't available immediately and things can change quickly, so it's important to make your own decisions.

Here are some handy tips:

- Think about the recent weather conditions. Avoid swimming when it's been raining a day or two before.
- Get familiar with the area – know where any drains or other outlets might be, and keep them downstream of where you're swimming.
- Generally, if you are standing in knee deep water and can see your toes, you should be OK.

Annual Report
2020/21



ANNUAL REPORT

Our 2020/21 Annual Report and Annual Report Summary was adopted by councillors in late November. The report outlines what we have achieved over the past financial year.

This year's report highlights a time of challenges, including the ongoing threat of Covid-19 and recovery from the delays caused by lockdowns and the February 2020 flooding event.

Despite adversity, there were some real achievements. A number of significant funding opportunities arose that required us to make plans for large projects and there was some exciting work in our People, Water and Land project.

Our Annual Report and Annual Report Summary is available online at www.es.govt.nz

Time to think about...

DECEMBER

POTATO WART – If you're pulling up your spuds for Christmas lunch, keep an eye out for potato wart, a nasty looking fungus that turns potatoes to mush. It's important to contact us if you suspect you have potato wart in your crop, as it needs to be dealt with correctly to avoid jeopardising our lucrative commercial potato industry.

CHECK, CLEAN, DRY – Freshwater pests, like didymo, lagarosiphon and lake snow can have a huge impact on our lakes and rivers. While you are out enjoying rivers and lakes around the region and further afield this summer, remember you are responsible for ensuring you Check, Clean and Dry your boat and all equipment that has been in contact with the water. You need to do this between every waterway, every single time.

NODDING THISTLE – This time of year nodding thistle is flowering and should be targeted for control. If you've got nodding thistle on your property, be a good neighbour and destroy all plants within 50 metres of a boundary.

JANUARY

MUSTELIDS (FERRETS AND STOATS) – These pests have just been through their annual spring/summer breeding season. They're a deadly menace to other wildlife, so now is a good time to set some traps around duck ponds, chicken coops, streams and bush areas.

RAGWORT – At this time of year ragwort plants which have made it through to flowering should be targeted for control. Remember to be a good neighbour and

destroy all ragwort within 20 metres of a boundary, especially where the adjoining property is carrying out cattle, deer or horse grazing as it is poisonous to these species.

SILAGE – If you're starting to make silage, make sure your cut grass is properly wilted before chopping and storing. This will considerably reduce liquid leaching from the silage stack. Stacks need to be 50 metres from any waterways, wetlands or potable water. Silage should not be stored on land that can become wet from springs, seepage, high water tables, or stormwater run-off.

FEBRUARY

FIREWOOD – Summer is perfect for thinking about future firewood supplies. Get it in now and store it correctly to ensure it has less than 25% moisture content when it is time to burn it. Stack it in a crisscross pattern to allow for airflow between the wood to dry it effectively. Go to www.BreatheEasySouthland.co.nz for a list of Good Wood suppliers.

WALLABIES – The animals, not the rugby type, are capable of causing huge impacts on Southland's biodiversity and economy if they get established here. This includes preventing regeneration of native bush, depletion of forest understorey and damage to tall tussock grasslands. They also compete heavily with livestock for pasture and crop. Wallabies are spreading out from their home range of South Canterbury and moving through Otago. If you happen to see or suspect a wallaby in Southland, please report this immediately to the biosecurity team at Environment Southland.

On the farm



By **KARL ERIKSON**
Principal land sustainability officer

'The best time to plant a tree was 20 years ago, the next best time is today.'

This old saying is perhaps more relevant nowadays than it has ever been.

Tree planting, whether it be for riparian management, soil conservation or shelter belt wind breaking, is always an excellent idea as it provides many benefits for your farm.

Today's farming systems require an ability to mitigate the contaminant losses that are discharged from farming activities and tree planting is an excellent way of achieving this.

Shelter belt tree planting prevents soil loss, provides shading, promotes biodiversity and increases pasture production. Trees and shrubs in the riparian zone prevent stream bank erosion and can intercept sediments and nutrients that travel overland toward waterways.

Of course, trees also absorb carbon dioxide, providing an ability to offset greenhouse gas emissions produced on farm and as a visual showpiece. Well planted riparian zones and blocks of native bush provide an abundance of aesthetic appeal.

If you are thinking of capitalising on the many benefits that tree planting provides and you would like help with creating your tree planting plan, give Environment Southland's land sustainability team a call on 0800 76 88 45.

To find out more about pest animals and weeds in Southland, including control advice and the latest rules, visit our Southland Pest Hub at www.pesthub.es.govt.nz

Out in the field



▲ Compliance officer Alex Tibshraeny removes part of a hot water cylinder from the Mataura River. Somebody had gone to the trouble of cutting the cylinder into several pieces before dumping it in the river.



▲ Environmental education facilitator Josh Sullivan talks about pest animals with students at Drummond Primary School.



▲ Diver Tom Kitto-Thomas makes the most of his training in Fiordland. A number of divers have been employed as part of the Jobs for Nature project to help control the invasive seaweed *Undaria*. The project received \$2 million in funding and is a joint partnership between Environment Southland, Department of Conservation, Biosecurity New Zealand and Fiordland Marine Guardians.