

# EnviroSOUTH

April 2022

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## Southland Regional Forum

Striking the balance

Page 4

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## International markets

From farm plans to consumers

Page 8

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## A deep dive

Undaria removal in Fiordland

Page 12

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environment  
**SOUTHLAND**  
REGIONAL COUNCIL

Te Taiao Tonga

## Contents

Connecting communities	3
Protecting the south	4
Striking the balance	6
International markets	8
Innovating water quality	10
Undaria diving: a dream job	12
The McPhail brothers	14
Flights and farm plans	16
Updates	18
Time to think about...	19
On the farm	19
Out in the field	20

## EnvirosOUTH

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### Contact Us

Cnr North Rd & Price St, Invercargill  
(03) 211 5115 | 0800 76 88 45  
service@es.govt.nz | www.es.govt.nz  
www.facebook.com/enviromentsouthland

### Cover

Michael Smith, William Smith (3) and Shahn Smith at the Aparima Community Environment group led assessment of the Pourakino River. Story page 3.



It has been a privilege to be the Council's chief executive.

After nearly 10 years in the role, I am retiring in May 2022.

The challenges have been and continue to be, significant, with increasing environmental pressures.

Even so, we've had some significant wins, such as intensive winter grazing rules; our stop banks holding during record floods in 2020; the 2016 velvet leaf response; plus strides in improving freshwater, which is an ongoing focus.

None of it would have been possible without the expertise and dedication of my staff, and Southlanders' unique ability to come together to address and overcome challenges - this I'm sure will continue to be key to a thriving Southland.

Thank you Murihiku Southland, it's been fantastic.

Heoi anō, ka nui te mihi whakamutunga ki a koutou katoa.

(And so (in closing), I thank you very much and bid you all, farewell.)

Rob Phillips, Chief Executive, Environment Southland



We are committed to improving water quality within a generation.

It is a journey we began with the community some time ago. There is still much to do and a lot we can all do to reach a state of hauroa – healthy resilience for our waterways.

Right now, together with our partner, Te Ao Marama, we are taking, and advocating, a step-by-step approach with a focus on the next 10 years.

Everyone is connected to a river catchment and can contribute. Farmers need to have active farm plans, businesses need to review their processes and individuals need to support wastewater system upgrades.

And, we all need to be open to innovation and change and participating in the Council's process.

I'd like to acknowledge and thank Rob for his significant contribution to the Council and the community during the past 10 years and wish him well for a happy retirement.

Nicol Horrell, Chairman, Environment Southland

## Environment Southland

A thriving Southland – te taurikura o Murihiku



Environment Southland land sustainability officer Bee Pika (left), with Rachael Halder from Thriving Southland (obscured), Francis Eade, Rosie Coburn (7), Louis Eade (8), Martha Eade (12) and Georgia Eade (10) check the results of their health monitoring assessment on the Pourakino River.

# Connecting communities through streams

With fresh scones and a hot cuppa to keep them going, communities are coming together to better understand the streams that line their properties.

Stream walks are led by Aparima Community Environment (ACE), which comprises the six catchment groups (like Pourakino) within the Aparima catchment. ACE wants to drive home the message that over time, changes in land use increases pressure on the waterways, soils and ecosystems. Stream walks, supported by Environment Southland staff, connect the Aparima community to these problems through the waterways they see every day.

ACE Group project coordinator Bridgett Aitken says Environment Southland is a key player providing resources and scientific knowledge.

"The community can learn these perspectives and how they can be applied at home. But stream walks are also about farmers meeting farmers and sharing stories of the river. We want to connect the dots between knowledge in the community and that of organisations like Environment Southland."

There were more than 30 participants at the first stream walk of 2022, in the Pourakino Valley. As well as enjoying each other's company, Environment Southland land sustainability officers Nathan Hughes and Bee Pika took them through a number of activities to help understand the health of the stream.

Pourakino Catchment Group chair Geoff Baldwin says he wants stream walks to highlight the signs of a healthy stream, so people have an idea of what is needed to improve others in the catchment.

Ōraka-Aparima Rūnanga representative Phil Fleurty reminded those present that it's the stories we share that connect us.

"It's what we pass onto the young ones. If we don't look after it now, there'll be nothing down the line. Listen to the people that live on the river," he says.

# Colin Young – a lifetime of protecting the south from floods

When Colin Young first arrived in Southland in 1979 the plan was short and simple – get in, get the job done and get out. More than 40 years later and recently retired, he shares what kept him in the deep south all this time.

Growing up in Balclutha and Oamaru before heading to Christchurch to study, Colin Young was employed by the Southland Catchment Board as a fresh-faced engineering graduate out of the University of Canterbury.

Southland had many flooding issues in the early 1970s, which led farmers to petition the Southland Catchment Board to provide rural flood protection.

“We had some major floods in the seventies and eighties. That’s when I was brought in, post the 1978 floods where most of the South Island flooded.”

While work was already underway on the rural schemes, these floods highlighted inefficiencies in the network. There was a mammoth task ahead for him.

Colin was placed in charge of the flood protection designs of the Mataura, Ōreti, Aparima and Waiau catchments. This

work was already in the pipeline and in some areas had begun before his arrival, however the 1978 flood was the catalyst for the government to grant and fast-track funding to the Catchment Board for these projects. This funding was allocated through the National Water and Soil Conservation Authority (NWSCA).

“If the works were more than \$50,000, cabinet approval was required for the government subsidy.”

Then when the 1984 floods occurred, the work was prioritised even further by the government and the Invercargill city flood protection was also included.

“Everyone thought the city was pretty good until the ’84 floods and large parts of Invercargill went under water.”

Colin had planned to come south for a few years and then head to the Middle

East for work opportunities, but when the 1984 floods hit, he decided to stay and help a community in need. He was part of the Gore, Mataura and Wyndham urban upgrades, along with the Winton Dam and Ōreti River rural stop banks.

“As well as being the design engineer, I also took on the role of site engineer because we did a lot of the construction in those days.”

Colin takes great satisfaction in knowing the designs worked, most recently in the February 2020 floods in Eastern Southland.

“It proved the stop banks worked to their design.”

One of Colin’s final projects had been collating the Climate Resilience Programme applications for government funding for some of the current projects with the late Paddy Haynes.

One of the biggest achievements in his career was the work towards the total catchment rating scheme – a change from a user-pays model to a total catchment model. The system, which acknowledges that everyone benefits either directly or indirectly, took 20 years to develop, collating the details from each catchment. To this day, this rating system is still being applied and other regional councils have adopted the principle after seeing the success in Southland.

“The hard part was convincing the ratepayers that these adjusted principles were fairer.”

Looking back on his time with Environment Southland there had been some major advancements.

“When I started they had just bought a PDP11/23, the first central-based computer, to do their rates and engineering works. The machine took up an entire room and took a long time to perform the calculations.”

In those early days, the PDP11 took 37 hours to perform the water level calculations and they would have to book the computer for the weekend. “Now you can do the same job in a few seconds.”

So what kept him in the job for more than 40 years? “I know that the projects that I have put together have actually helped the community and I have become very much a part of the community. I enjoy living in Invercargill and being a Southlander.”

While still involved in the climate resilience projects but supposedly retired, for now, Colin is aiming to spend a bit more time on the golf course. “I’m trying to improve my golfing, it’s a process and it’s taking a bit of time.”



▲ Colin Young



▲ Colin Young discussing his work in the field with Cr. Lloyd Esler, Chair Nichol Horrell, Robin Wilson (now retired from Environment Southland), and Cr. Eric Roy.

# Striking the balance for Southland's future

Southland Regional Forum member Vaughan Templeton is one of 15 members of the community group looking to find the balance of actions that will improve water quality and ensure the region continues to thrive.

Vaughan joined the Southland Regional Forum in 2019 because he could see the need to get on top of Southland's water quality, so it did not deteriorate any further.

"I personally needed to see what improvements we needed to make, and I thought I could be helpful in giving a community perspective in how to improve water quality and maybe some of the systems that would work in practice."

"There's no doubt it's a wicked problem because we need to restore the mana of the rivers that are degraded in places. And we need to do that without removing the mana of our people and our province, so it really is a balancing act."

Vaughan and wife Megan farm at Riverton, where Vaughan's family ran a flax mill business for several generations.

In the 1950s the Templetons' very flat coastal property was drained with open drains to bring more area into production for flax/harakeke fibre for ropes and twines for baling hay. When that industry collapsed last century due to cheaper imports, the family turned to farming, though they still crank up the restored flax mill/museum as a heritage attraction. The land was initially developed for extensive sheep and beef farming. Vaughan and Megan converted their half of the family farm to dairying in 2002.

The farm is in transition, with two sons each buying out their dairy units. Vaughan and Megan have retained a calf block and have a little beef still. Vaughan also maintains a pine plantation around the

coast himself, and sells to the Niagara Sawmill, enjoying the fact that some of it is used locally.

The main feature of the farm, other than 4km of sandy beach, is the Otaitai Stream which has a small catchment of about 5000ha draining through the farm out into the bay. Although highly modified, the stream has an important role in the development of juvenile flounders, white bait and a good population of tuna (eels). "We are really thinking about the effects of our farming system on this waterway and what may be required for its enhancement."

**"There's no doubt it's a wicked problem because we need to restore the mana of the rivers."**

VAUGHAN TEMPLETON

"Over the years the Catchment Board (now Environment Southland) drainage works has directed the water in and around our wetlands. Now with my work on the regional forum I realise if we could divert freshwater back through the wetlands, it would actually be a polishing system for the whole catchment of the Otaitai Stream that comes out down here past the flax mill."

The Templetons have spent several years planting native species in the wetlands, and Vaughan is very proud of that work.

"We've been working with the regional council, trying to poison the willows because they're encroaching on the wetlands. The native plants are all in amongst those willows, it's full of pittosporums, coprosmas and cabbage trees and they're coming up like fury."

"The forum has really made me aware of the effects we can have on waterways, and in many cases in the past we weren't really aware how damaging they were. Now we have a better understanding of the effects of excess nutrient loss and sediment, I think we can make significant progress."

The real question is whether this is enough to meet the community's expectations."

The Regional Forum is tasked with providing the council and Te Ao Marama with recommendations on how Southland can achieve its goals for freshwater over the next 25 years.

The Regional Forum is now drafting these recommendations, due to be presented mid-year.

Vaughan believes the forum's advice will be our best attempt at balancing the needs of our waterways for our children's future and retaining a thriving economic base for our region.

## 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 our communities' aspirations.

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 regular workshops taking place all around the region every month or two.

Forum members have been working to build their understanding of Southland's water quality and quantity challenges through reports, presentations, and field trips – taking into account cultural, science, economic, social, and planning considerations.

They have heard from many key stakeholders – including Ngāi Tahu, different hapū 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](https://www.facebook.com/RegionalForum), or search for Regional Forum on the Environment Southland website – [www.es.govt.nz](http://www.es.govt.nz).



▲ Vaughan Templeton (centre), with Southland Regional Forum members (L-R) Hayden Slee, Fiona Smith (Chair), David Diprose and Paul Marshall at a workshop in Tuatapere.

# When Lord of the Rings meets red meat customers

The connection between farm plans and a steak consumer in France or America might seem tenuous, but both play a significant role in making New Zealand successful on the international stage.



▲ Nick Beeby, Beef + Lamb New Zealand general manager market development.

**B**eef + Lamb New Zealand (B+LNZ) general manager market development Nick Beeby says the international research they've carried out to understand New Zealand's key market segments identified six main groups.

"Through that segmentation process, we identified and delved deeper into one segment that we call the 'conscious foodie'. Basically these are the consumers that care a little bit more about the quality of their food, and how that food was produced," Nick says.

"But they weren't buying these products so much to save the planet, they were buying them because a better quality,

better tasting meat product is going to be better for their own personal health and wellbeing. And they're certainly prepared to pay more for the food that they believe aligns better with their own values."

Nick was born on a Hawke's Bay family farm, which he maintains a connection to today. He's had a few different roles with B+LNZ over his nearly 20-year career, four years of which he spent in Europe developing markets there.

While he admits he still can't speak French or German, Nick says he loves the different roles he has had within the sector. "I get to see what's happening on farm, and see what's happening around the world, and I

get to try and influence customers to buy and pay more for our products."

Nick says there's a growing theme around consumers purchasing closer to their own values, and this is one where New Zealand can continue to set ourselves apart from everyone else."

"We know consumers are starting to care more. Country of origin is a really important purchasing driver because it's a shortcut to consumers' understanding and trust of the food production systems."

Consumers look for where that product has been produced. "If that country gives the consumers a sense of trust and understanding, and it's a positive sense of trust and understanding, then they'll feel good about that purchase and they'll keep it."

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"With programmes like these we've moved from being able to tell people we're doing a good job, to showing them."

NICK BEEBY

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Unfortunately, international consumers' knowledge of New Zealand and our food production systems is very low.

"It is Lord of the Rings, it's the 100% Pure ads, if anything. That's about it."

Nick believes there's two aspects to overcoming this challenge. The first can be overcome on-farm.

"As consumers and the wider public increasingly demand strong environmental and animal welfare management from our producers, our farmers need to be able to demonstrate that they are living up to the attributes that customers and consumers believe are important to them."

In the red meat and wool sector, programmes like the NZ Farm Assurance Programmes are helping with this.

The New Zealand Farm Assurance Programmes (NZFAP and NZFAP Plus) are voluntary, nationwide programmes that aim to provide confidence and certainty to consumers worldwide that the meat

and wool produced from New Zealand's sheep, beef and deer farms is authentic, genuine, and safe. Collectively they provide assurances regarding integrity, traceability, and go deeper into areas around sustainability – soil, water, climate change, biosecurity and biodiversity, and into the ethical areas, animal health and welfare, treatment of staff.

The other part of the challenge is about raising awareness. "There is a real job to do to raise awareness and preference for grass-fed beef and lamb from New Zealand and our natural, sustainable farming systems with our target audience. That basically sets the context for all our red meat brands to succeed."

That part of the challenge is being tackled by B+LNZ's Taste Pure Nature origin brand. This programme aims to grow the number of consumers who are actively out there seeking out these products, and then by working with partner red meat companies, consumers are pointed to where they can buy their brands. This collaboration is critical to the programme's success.

Nick says environmental farm plans and assurance programmes are really the truth behind the story. "With programmes like these we've moved from being able to tell people we're doing a good job, to showing them. These programmes provide the evidence."

"All the red meat companies have worked together to develop the assurance programmes and are now members of New Zealand Farm Assurance Incorporated along with 23 wool companies, so we're able to provide very clear signals around what the market is deeming important for farmers to be undertaking on their farms."

Nick says the alignment across the industry is critical.

"It's not just meat companies telling farmers what the market believes is important; B+LNZ is supporting farmers to reach those standards."

"Everyone's talking about the same thing so it's cutting out that clutter to farmers around what they should be doing. That alignment across all of us is really exciting and is fundamentally different from what was the case a wee while ago."



## Need a farm plan?

For advice on putting together a farm plan or updating your existing farm plan, contact the Environment Southland land sustainability team or your industry reps.

Go to [www.es.govt.nz](http://www.es.govt.nz) for more information or call 0800 76 88 45.

# Leading the charge to improve water quality

When tasked with a challenge, Mokotua sheep and beef farmer Ray McCrostie likes to take the bull by the horns. Through innovative technology Ray continues to lead the charge in the environmental space, with the benefits evident in every aspect of his farming operation. He shares his why and encourages others to take the leap and do the same.

Ray has been farming at Mokotua in the Waituna catchment for 52 years and has tackled many challenges in this time - none bigger than water quality.

It's a story that's been shared a few times, how having a beer with automation engineer Richard Dean and water scientist Clint Rissmann led to the development of Derrick, a machine that automatically analyses all aspects of water quality on his farm.

"My role was to bring the practical to something that is quite complex."

"It's just my cocky logic, the New Zealand attitude - this idea has potential, so I'll give it a crack."

Ray took a big leap when it came to developing Derrick. "In order to get ahead in this environmental game, we're going to need to take risks and put ourselves out there."

Measuring water quality on his property came with some potential risks about what the analysis would uncover, but Ray had always been doing the work to future proof his farm for the next generation.

It is in three different forms of measurement from Derrick, all changeable in different ways, which has helped him further shape his farming operation, from the water and soil through to the stock and feed taken off the land.

The first, he says, is the electronics, which can be independently set to a level across multiple situations, be it rural or urban. They can also be cross-referenced with the second measurement, the laboratory analysis.

The most important though, the third measurement is the cross-check in the performance of stock and the overall farming operation.



Right - Ray McCrostie (right) and son Carl discuss improvements which will be made to Derrick 2.0.

"Observation shows you would think we are doing something right."

The analysis from Derrick has meant Ray has been able to make adjustments to many decisions in his day to day farming, such as his fertiliser mix.

"I've added gypsum to the mix, which is in gib board, as a matter to bind particles in the soil and it's a good source of magnesium."

It is that sort of thinking that has seen the risk Ray has taken, turn into reward, which is why he is surprised more farmers haven't jumped at the concept of Derrick.

The correlation between the water analysis, resulting from good environmental management practices and the feed quality and stock health on-farm, should pique all farmers' interests, he says.

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"It's just my cocky logic, the New Zealand attitude - this idea has potential, so I'll give it a crack."

RAY MCCROSTIE

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By way of example: A recent baleage cut, which a dairy farmer Ray was selling the bales to had estimated he would get 40-50 bales from - he pulled off 90. Only days before he had also taken off works' lambs, which had averaged 21kg.

Most farmers would have baleage paddocks closed off for weeks to achieve the best quality cut possible, but Ray had managed to do both, because of the information Derrick was providing him.

There are further improvements planned for Derrick, which he has worked on with his son, Carl. These will include more sensors, a twin cabinet design and testing of dissolved oxygen. The current Derrick is only the prototype.

"There is no end goal - I'll stop when I'm dead," he says, laughing.

Right - Prototype Derrick is used to analyse water quality.



# Undaria diving gives opportunity at lifelong dream

The opportunity to submerge himself into a new career came at just the right time for Te Anau resident John Carter.

John is working as a diver in the Environment Southland-led Ata Whenua Fiordland *Undaria* Control Programme.

The programme was funded by \$2 million from the Department of Conservation (DOC) Jobs for Nature – Mahi mō te Taiao in April 2021. The Jobs for Nature programme helps revitalise communities through nature-based employment to stimulate the economy post-Covid-19.

Before entering the *Undaria* programme, John was already working three jobs and taking care of his son Jasper (14) as a single parent.

But keeping up with three jobs was a struggle, so after quitting his full-time role as an early childhood teacher John happened upon an advertisement for divers to remove *Undaria* in Fiordland.

“The whole notion of becoming a scientific diver was a dream 20 years ago but never really possible,” he says.

John has always had an affinity for nature and pest control, with a long-term involvement in stoat and rat trapping in Fiordland, and water through the local open water swimming club.

“I want to be doing something with my hands to improve the environment.”

Following his dreams of being involved in marine science was put on hold due to circumstance – being based in Te Anau, being in a new relationship – he wasn’t prepared to move somewhere else and go to university to study, he says.

However, he never let go of his passion

for biosecurity so when he saw the advertisement again last year he was finally in a position, and had the support, to follow his dream.

“For me, I’m a single parent, it just wouldn’t be possible without people being willing to support me. So it’s really quite humbling as a middle-aged white guy to have people around who actually want you to try and live your dreams.”

Due to the changes in Covid-19 alert levels throughout the year, dive training was staggered and done locally in Milford Sound and Invercargill.

The first stage included getting an open water diver certificate through training with Descend NZ, a Te Anau-based dive company.

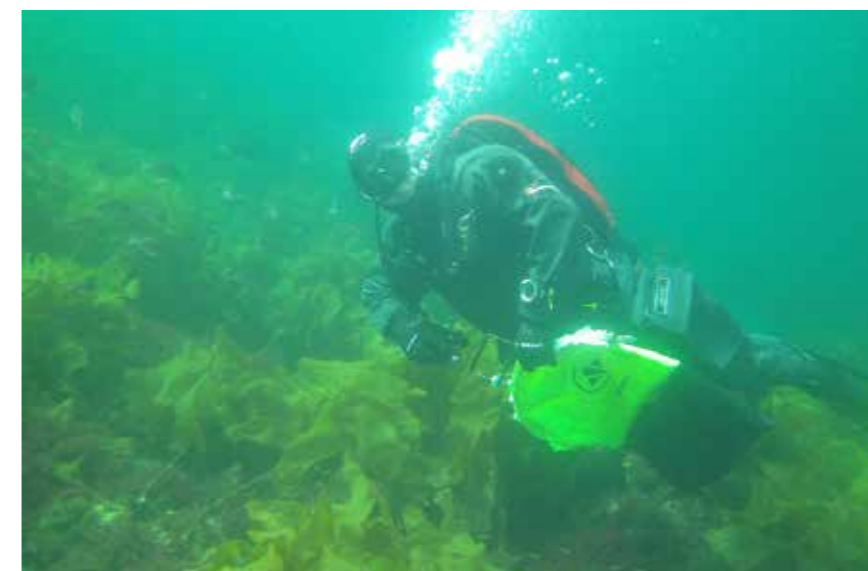
While John had previous dive experience, the training for the certificate gave him a well-rounded update, since there has been many developments in diving since he first learnt to dive, he says.

“The thing I loved about the training was just seeing the different people come together. There’s firemen, panel beaters, aluminium window makers, early childhood teachers. Each person is bringing life experience in a way I guess we didn’t when we were at school.”

Fiordland has been impacted by the drop in tourism numbers due to the Covid-19 pandemic. The DOC Jobs for Nature programmes run in the area have allowed some residents to retain employment despite the drop in international visitors.

“There’s still plenty of work around here but it’s different work. The people who

◀ *Undaria* diver John Carter



have stayed on and have managed to get on, I guess, were either here before tourism was a big thing or have found other skills to get in on.”

Following completion of their training, the Environment Southland dive team began operations in Te Puaataha Breaksea Sound in December 2021.

With the support of a team of contracted scientific divers, the team spent the first two weeks completing some initial surveys to estimate the extent and density of the pest plant *Undaria* and to trial various methods for removing the *Undaria* biomass.

*Undaria* has the potential to have substantial impacts on the environmental, economic, cultural, recreational and aesthetic values of Fiordland.

While John knew *Undaria* was an invasive species in Fiordland’s marine area, he didn’t know much before he actually hit the water and saw the problem for himself.

He calls this type of learning “understanding it from the roots up rather than the top down”.

“It’s actually taken me a really long time to understand *Undaria*. I couldn’t see why it was a problem. I knew it wasn’t natural there, but after pulling it out and looking at what’s native around it I can see it’s a really bad problem. When it dies off in the winter that whole habitat is gone for fish.”

A usual diving day for John includes three to four 50-minute dives removing biomass and filling collection bags. The divers typically spend six days a week diving, leaving for the boat on a Monday and returning the following Monday.

The divers collect about a tonne of *Undaria* a day, which is removed and disposed of in the Fiordland National Park.

“When you see the weights and the volume you realise you could never do this job free-diving.”



## UNDARIA

*Undaria* is a pest seaweed with an ability to quickly establish and outcompete native marine species. Nicknamed ‘the gorse of the sea’, *Undaria* is a threat to Fiordland’s unique marine environment and the fishing and tourism economies it supports.

*Undaria* is common in New Zealand ports and adheres to hulls and boating equipment.

All vessels entering within one nautical mile of the landward boundary of the Fiordland Marine Area are required to have a clean vessel pass beforehand to prevent carrying in *Undaria*. A clean vessel pass is free and can be obtained online at [es.govt.nz](http://es.govt.nz).



Of course, the divers do not just have themselves for company underwater. All manner of curious sea life surrounds them.

Shellfish and starfish are living alongside the *Undaria*, but swimming amongst it are stingrays, sharks and tiny angry fish annoyed at the divers for stealing their precious weed, John jokes.

Photos: Top – John Carter underwater  
Left - Loading *Undaria* onto the boat

# Family ties, flood protection and building community resilience



▲ Richard (left) and Jeremy McPhail

The McPhail brothers grew up with the changing moods of the Mataura River and as adults are very conscious of how connected we all are to our rivers and the need to keep building community resilience in relation to them.

Richard and Jeremy McPhail are sixth-generation descendants of Hugh and Grace McIntyre, pastoral leaseholders of the original 22,000-acre run, Merino Downs, in the hill country of the Waikaka Valley, northeast of Gore

In the eighties, Richard left the farm to pursue what would become a 30-year career with the Police, but he's quick to

point out that as the older brother, it was him that taught Jeremy to drive a tractor.

Today both brothers farm and hold governance positions as councillors in Murihiku Southland. Richard is with Gore District Council, and Jeremy is the Environment Southland councillor for the Eastern-Dome constituency. Their father, Neil, served four terms as councillor for Environment Southland. You could say it's in their blood.

They have a life-long connection to the Mataura River and its state of flow. As boys, they travelled over the Gore bridge every day to school.

"You always paid attention to the river whether it was high, whether it was low, whether it was flooding," says Richard.

The flood protection schemes communities rely on in the Mataura catchment have taken on more relevance since they became councillors.

"As a landowner, you pay close attention to flood protection schemes when you live along the flood banks. My real interest has

developed through my role on Council and the realisation that these stop banks are our infrastructure – our assets that we have to look after," says Jeremy.

Richard says, "Plus, the river travels from A to B. It doesn't stop at a boundary. It doesn't understand the territorial authority. The Mataura River will flow from Fairlight to the coast, and it's up to us to figure out how we're going to live with the river and manage the effects of living close to it."

Both brothers recall the '100-year flood' in 1978. "Being older, I remember the '78 floods quite vividly," says Richard. "It was such an expanse of water and such a major event to experience in your growing years."

Jeremy says, "It was unreal. I was nine years old, and I remember standing on the bridge with Dad, amazed at just how much water was flowing down the valley. I had never seen water like it before."

In February 2020, they knew a big one was coming. "The unknown was just how big it would be, and that was challenging.

But today, we have the systems and technology in place to deal with such an event, and from my perspective, we saw that working extremely well," says Jeremy.

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"Being older, I remember the '78 floods quite vividly. It was such an expanse of water and such a major event to experience in your growing years."

RICHARD MCPHAIL

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"There will be times when we can't hold all of the water back. We can only do so much. So, it certainly gave the community a bit of a wake-up call."

Richard expressed how their staff and the community in Gore showed immense resilience. "The information coming from

the main emergency management base in Invercargill was great. Some of it was a bit scary, and understandably the staff had concerns for the township."

This work prompted a number of projects focused on upgrading Southland's flood protection schemes.

"At Environment Southland, we're engaging with the rural districts and with the Invercargill City Council on these upgrades. Some of the work requires tree removal, which may upset a few folks. But as a community, we need to realise the greater good of doing this work. It's about increasing the level of flood protection for communities and critical infrastructure," Jeremy says.

Richard says, "Gore is a rural town, a service town. It's so crucial for the rural community to protect their support centre. And vice versa. The same applies to Matura, any of these small towns."

Jeremy says, "It might not seem like we benefit from these measures, but we are all linked economically and socially. The bigger picture is protecting certain assets throughout the province. There will be a cost to this, and we're working through that."

When the brothers are around the same tables on shared projects it's not easy to leave work at work.

"We talk about it, regardless; whether it's our roles as councillors, farming or the best comedy on TV. Working across the table has more pros than cons," says Richard.

Jeremy adds, "We bounce ideas off each other. We discuss governance and organisational structure. And I still talk with Dad. I joke with him that I'm still trying to fix all the problems he caused! Seriously, it's good sitting down with him – he's got a lot of knowledge from over the years."

"The worst part is that we often get mistaken for each other. People will come up and complain about something, and they will have the wrong brother! When I was in the Police, I used to pretend I was Jeremy," says Richard.

"But they always knew that I was slightly thinner and a wee bit better looking!" laughs Jeremy.

Richard has the final word, "At least I kept my hair!"

## ENVIRONMENT SOUTHLAND'S CLIMATE RESILIENCE PROJECTS

In July 2020, Environment Southland received \$13.875 million over five years from central Government through Kānoa (the Regional Economic Development & Investment) for projects to accelerate improvements to critical flood protection across the region.

### ▶ INVERCARGILL CITY STOP BANK UPGRADE

Upgrades to the Waihōpai River and Kingswell Creek stop banks to meet the increase in extreme sea levels in the New River Estuary/Kōreti.

### ▶ STEAD STREET PUMP STATION REPLACEMENT

Replacement of the Stead Street pump station that provides drainage for the Invercargill Airport and surrounding land south of Waikiwi Stream.

### ▶ GORE FLOOD PROTECTION UPGRADE

Upgrades to existing stop banks on the Mataura River in Gore to improve the integrity of those defences and increase the town's flood protection.

### ▶ MATAURA FLOOD PROTECTION UPGRADE

Riverbank stabilisation work and upgrades to stop banks on the Mataura River, Boundary Creek and Waimumu Stream. The Boundary Creek stop bank has been extended by 380 metres.

### ▶ WYNDHAM FLOOD PROTECTION UPGRADE

Upgrades to existing stop banks in Wyndham. Priority is being given to filling gaps in the current structure at Ferry Street and linking the Mimihau stop bank to higher ground.

### ▶ WAIU RIVER FLOOD DAMAGE REMEDIATION PROJECT

Flood damage remediation work in the lower-to-mid reaches of the Waiau River. This project is on farmland and provides river edge protection to the Waiau above Te Waewae (Waiau) Lagoon.

For further information go to [www.es.govt.nz](http://www.es.govt.nz) and keyword search "resilient river communities"





▲ Nigel McCormack points out the buffer zone around the waterways.

# Flights, farm plans and five metre buffers

Information from cultivation flights is providing valuable information for farmers.

Cultivation flights show Murihiku Southland from a different perspective. A bird's eye view highlights where water transport routes lie on the landscape. Staff are using this

knowledge to work with farmers on plans for intensive winter grazing practices before animals get into the paddock.

From the air, you can see paddocks that look like they may pose a greater risk for contaminant loss.

Principal land sustainability officer Karl Erikson says, "We're looking out for steeper slopes, paddocks with lots of waterways or critical source areas. These are gullies or swales where water hits the landscape and become the main transport areas off the

land into waterways."

Now in their third year, the cultivation flights are part of a wider engagement programme supporting farmers to plan ahead when it comes to winter grazing. If any areas of interest are identified, land sustainability staff get in touch with the land owner or grazer and offer a free winter grazing plan to fit these tricky areas.

"Farm plans are a key pathway to improving water quality, so using them as a guiding tool should be at the forefront

of the planning process," Karl says. "We started cultivation flights because we were thinking about how we could be proactive and get in there to give advice before issues come up."

Last year, 11 farmers identified from the flights took them up on it. "Every offer that we've made has been accepted, and I've been getting heaps of calls from farmers for a yarn saying we're coming up with some good ideas."

Like Nigel McCormack. He's a dry stock manager and tractor driver near Mandeville who oversees stock on six dairy farms. When Karl and the team got in touch about paddocks that looked risky last season, he worked with them to find a solution for run off and mud.

"There's two creeks down there and it was pretty wet during the middle of winter. There were two places that were looking pretty bad."

On Karl's advice, five metre crop buffers were left around the waterways with the intention they remained ungrazed throughout the winter. Nigel says he has noticed improvements in the paddock since, and is taking steps to see what works best for the farm. "This season we didn't actually sow one paddock, so the five metre buffer is just natural grass. The other paddock with the creek is sowed

with seed so we'll see whether there's much of a difference for keeping it dry."

He says the advice and suggestions he has received are rooted in common sense and more often than not, simple changes make a big difference. For example, fencing the buffer.

**"Farm plans are a key pathway to improving water quality, so using them as a guiding tool should be at the forefront of the planning process."**

KARL ERIKSON

"It is more work but it stays up year round. It's better than getting a letter, it's helping the company and the lifestyle, and it's keeping the animals healthy."

Nigel sees the collaboration as a way to make use of the knowledge within the council and tailor it to his situation. "It's wee simple things that we don't think about, but it's Karl's job to sit in his office and think about them," he laughs.

When the thinking's done, the land sustainability team go to the farm. It's an aspect of the cultivation flight programme Nigel has found truly valuable.

"There's a lot of changes coming up (to winter grazing rules), we read it in the paper or whatever, but that can be in one ear and out the other. When someone comes and actually shows you the practical side and says 'that's not right you should do that there,' you're in the paddock. Even if it's only 20 minutes or half an hour, it sticks with us better."

Those changes include a national environmental standard on winter grazing from central government, as well as rules in the proposed Southland Water and Land Plan.

"In the future there'll be a certain amount of criteria to meet in order to winter graze without a consent," Karl says. "A winter grazing plan is part of the wider farm plan, which will be subject to auditing in the future. Getting a farm plan is a way to set your goals and follow them."

Nigel agrees. "Makes my job a bit easier because I can tell the others and share it. We're farmers. We just go ahead with our daily routine and work. If you're told what to do and it's going to help your farming, bloody do it."



▲ A five metre buffer zone between a crop and the waterway helps prevent contaminants finding their way into water.

# Updates



## OUTDOOR BURNING

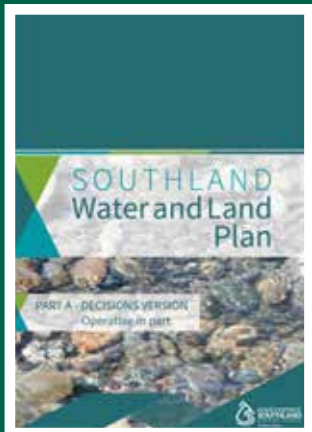
Our winter air quality monitoring season gets underway on 1 May. Although we monitor air quality in Invercargill and Gore all year round, we have a special focus during the winter months when air pollution is at its worst.

Poor air quality can impact on people's health, especially our most vulnerable so we need to work together to improve it.

From 1 May until 31 August, most outdoor burning is prohibited within the Invercargill and Gore airsheds. You can continue to use barbecues, hangi and braziers. If you live outside the airshed, you are permitted to burn but there are rules about what you can burn and you are responsible for ensuring you do not create a smoke nuisance that affects others.

Find out more about the burning rules at [www.BreatheEasySouthland.co.nz](http://www.BreatheEasySouthland.co.nz)

## PROPOSED SOUTHLAND WATER AND LAND PLAN



The last half of 2021 saw numerous rounds of mediation between all those involved in the remaining provisions of the proposed plan that are under appeal. A large number of the issues under appeal were resolved through the court-facilitated mediation sessions, although these have not yet been approved by the court. The provisions not agreed through mediation went to an Environment Court hearing which began in mid-March.

There are also two discrete issues as part of the appeals process that will be heard at separate Environment Court hearings and we expect these to be scheduled before August this year.

## STOP BANK UPGRADE AT BOUNDARY CREEK



Environment Southland has completed work on the Boundary Creek stop bank at Mataura.

This is part of the Mataura Flood Protection Upgrade, which is one of a number of Climate Resilience Projects being delivered by Environment Southland for the region. Funding from central government has enabled this work to be brought forward in the Long-term Plan and at a much lower cost to the community.

Earthworks for the stopbank upgrades are generally confined to the dry summer months to achieve the necessary engineering specifications for compaction. A 380m extension of the Boundary Creek stopbank was undertaken in early 2021 and work to strengthen and reshape the full 1000m of stop bank has just been completed.

# Time to think about...

## 📅 MAY

**MUSTELIDS AND RATS** – While getting the duck pond ready for shooting season, consider setting and checking traps for mustelids (ferrets and stoats) and rats.



## 📅 JUNE

**RABBITS** – Winter is the most effective time for rabbit control before they start breeding again in spring. Check our online Southland Pest Hub for advice, or call the biosecurity team.



**CHECK, CLEAN, DRY** – When moving your boat between waterways this duck shooting season, remember to Check, Clean and Dry all your gear to ensure you don't spread any unwanted freshwater pests.



BETWEEN WATERWAYS

**FIREWOOD** – Make sure you've got yourself stocked up with dry wood for winter. If you haven't already, get in touch with one of our Good Wood suppliers. You can find a list on [www.BreatheEasySouthland.co.nz](http://www.BreatheEasySouthland.co.nz).



## 📅 JULY

**WALLABIES** – The animals are capable of causing huge impacts on Southland's biodiversity and economy if they get established here. If you happen to see or suspect a wallaby in Southland, report it to us immediately.

**GORSE AND BROOM** – We're asking Southlanders to be good neighbours, and remove all gorse and broom within 10 metres of their property boundary. Good neighbour rules also apply to ragwort and nodding thistle. There are a range of control options, check our online Southland Pest Hub or call the biosecurity team for advice.



## On the farm



By **KARL ERIKSON**  
Principal land sustainability officer

Is your farm environmental plan ready for auditing?

Farm environmental plans (FEP) have become a familiar document for Southland farmers since Environment Southland's proposed Water and Land Plan made them mandatory for all properties over 20 hectares in May 2016.

While the majority of the region's farms have these FEPs in place, the question is – are farmers regularly using their FEPs? How well are you prepared for a whole farm plan audit?

In order to get the best use of FEPs, farmers need to be consulting this document regularly, whether that be for planning ahead for activities like winter grazing, setting the farm's environmental goals or carrying out an on-the-ground mitigation for your farm, e.g. a sediment trap or some riparian planting.

In the near future, environmental plans prepared for farms will be required to undergo an audit to prove a farm's environmental performance. Are you prepared for this process?

Our land sustainability team can help farmers use their FEP well and to be ready for farm plan auditing. So give us 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](http://www.pesthub.es.govt.nz)

# Out in the field



▲ Biosecurity and biodiversity operations manager Ali Meade resets an A24 rat trap in the Omaui reserve.



▲ Science assistant Jeremy Littlejohn collects deposited fine sediment samples with a quorer at McKay Creek on Milford Road.



▲ Senior environmental technical officer Grace Finlayson uses a secchi dish to measure visual clarity on Lake Manapouri.



▲ Senior land sustainability officer Keith Finlayson discussing different types of soils and physiographic zones at a staff training day