

EnviroSOUTH

April 2019

Water story

Telling the story of water in Southland

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Technology versus pests

The Waituna Pedator Free project

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environment
SOUTHLAND
REGIONAL COUNCIL

Te Taiao Tonga

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EnviroSOUTH

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Cover

Waverley Park School students clockwise from left: Asha Rickard, Cheyda Tonihi, Helen Kennedy (deputy principal) and Amaia Cooper with the stencils they designed to remind people about stormwater drains. **See story page 16.**



What an amazing few months we've had listening to people tell us why water is important to them.

You might have seen us – we went to supermarkets, A&P shows, markets, Crank Up Day and many other community places. Some people contributed via our online engagement hub at www.haveyoursay.es.govt.nz.

The *Share your wai* campaign was about collecting the diverse views of Southlanders to inform our People, Water and Land programme - Te Mana o te Tangata, te Wai, te Whenua to improve water quality.

All the comments will be very helpful for our newly formed Regional Forum, which will be advising the Council on ways to achieve communities' aspirations for freshwater.

If you were one of the many people who stopped to talk to us, or if you responded online, thank you, your contribution to Southland's future is much appreciated.

Rob Phillips, Chief Executive, Environment Southland



Our People, Water and Land programme is picking up momentum with the newly created Regional Forum.

The programme is a partnership between Environment Southland and Te Ao Marama (the environmental arm of Ngāi Tahu ki Murihiku). The role of the Regional Forum is to advise the Council on ways to achieve our communities' values and objectives for freshwater.

It is an important job which requires consideration of on-the-ground ways to make changes along with specific policies and rules.

We had 60 people keen to join the forum. Narrowing the number down was very difficult as everyone had something to offer and I hope each of them will continue to participate in the process as we progress.

I'm confident that the members of the Regional Forum have the range of skills, open-mindedness and diversity to tackle this demanding and vitally important role.

Nicol Horrell, Chairman, Environment Southland

Environment Southland



A thriving Southland – te taurikura o Murihiku



A stream discovery

▲ Back to nature: Bluff School students Madison Rufford and Tabby Jessiman (both 8) discover what's in their local stream.

Bluff School children will have the opportunity to get back to nature in their own backyard during a year-long study of their local stream.

The children took their first field-trip to the stream, located behind the Te Rau Aroha Marae, in January and will be spending the school year discovering more about the stream, the animals and insects it supports, and where it comes from.

Teacher Tupou Salesa says learning about the stream gives children the opportunity to connect back to nature and to their community.

“Most of these children have ties to the marae, and this enables them to come

down here and appreciate nature, as well as strengthening their connection to the marae. It gives them some ownership over the environment in their backyard – it teaches them how to look after our environment, which is what we're really trying to push. It is a beautiful place.”

The marae has played an active part in the project, ensuring trees are cleared alongside the stream and creating a path and wooden decking so the children have a safer learning space.

Environment Southland environmental education officer Pat Hoffmann is supporting the school with its stream study, and says it is a great way to get children out of the classroom and learning about the environment.

“It is a special place to the Bluff community and they have invited us to use it as a place of learning. The kids were really buzzing after we spent time at the stream – they were very interested, they were asking a lot of questions, and they had fun!”

Toxic algae warning signs go up

A project is underway to install signs at some of Southland's most popular recreational water spots. The signs encourage people to be aware of their surroundings and make their own assessment of the health risk from toxic algae.

Over recent years, toxic algal blooms have become more prevalent in waterways and lakes around the country, and Southland hasn't been exempt.

The Recreational Water Group, which includes Environment Southland, Southland District Council (SDC), Public Health South (PHS), Invercargill City Council and Te Ao Marama Incorporated, has been discussing the issue, and decided to install permanent signage.

SDC environmental health manager Michael Sarfaiti says signs are already up at three spots in Southland – the Aparima River at Thornbury, the Waiau River at Tuatapere, and at each entrance to the Waituna Lagoon – and more will follow.

“We've put up these signs with our partners to help raise awareness and alert locals and visitors alike. More signs are planned to go up in other areas where blooms may pose a risk.”

PHS health protection officer Renee Cubitt says toxic algae are always present in the water, but in warm summer conditions when there's been little rainfall, they can form blooms that can pose a health risk to water users.

“People can become unwell after direct contact with the skin, accidental swallowing of affected water, or eating affected seafood.”

Young children playing on the water's edge are particularly at risk from touching

algal mats, and ingestion of even a small amount can be fatal to dogs, who are attracted to their musty smell.

Environment Southland regularly monitors rivers for toxic algae, however it's impossible to monitor everywhere so it's important that people know what to look out for.

Toxic algae presents as brown/black slime on rocks, and mats on river banks. In lakes, look for a greenish tinge or globules in the water.

If you or your dog become unwell after contact with toxic algae, seek medical advice promptly from your doctor or vet, or by contacting Health Line on 0800 611 116.

More information is available at www.es.govt.nz/toxic-algae.



▲ Health protection officer Renee Cubitt with one of the new signs at the Aparima River at Thornbury.

Piecing together the New River Estuary puzzle

About 50 experts and community members met recently with the common goal of working together for the health and wellbeing of the New River Estuary near Invercargill.

The discussion was initiated by ecologist and environmental scientist Dr Jane Kitson, Sunrise Rotary member Richard Kyte, Labour List MP Dr Liz Craig, and New Zealand Landcare Trust Southland Catchment Group project coordinator, Sarah Thorne.

Over the past 150 years, the estuary has been significantly affected by urban and rural development. This includes large areas of reclaimed land, urban discharges including treated sewage and untreated stormwater, past landfill leaching, and agricultural activities and run-off further up the catchment. As a consequence, sedimentation, excessive nutrients, toxic contaminants, disease risk, and habitat loss are all major issues now currently facing the New River Estuary.

Young and old, men and women, urban and rural; it's about everyone working together to find ways to look after our water quality and do their bit.

SARAH THORNE

A core purpose of the group that arose from the forum is to encourage a cohesive approach to the estuary's management and to work together as a community,



▲ From left; Dr Liz Craig, Dr Jane Kitson and Richard Kyte.

says Jane. "It's about forming a network and making those connections. We need to work together and make each other accountable."

Richard says the group is focusing on four key areas: what the current situation is in each area, for example, with stormwater discharge; what would need to happen to address the issues; what is already being done and by whom, and; what the local community could do to help.

During the first six months, the central focus will be on having conversations with local councils and Government agencies, iwi and the community, says Dr Craig. The aim will be to try and develop a shared understanding of the issues, identifying who is responsible for which aspects, and what the community can do to help. "We can then develop a plan for action for the next one-to-two years," she says.

The need for a community-driven approach was highlighted at the first forum, with all groups – rural and urban – acknowledging the need to work together in a positive way, rather than attribute blame.

Sarah, who works closely with farmer-driven catchment groups, says when change comes from communities, by communities, communities are passionate and connected to it.



▲ Sarah Thorne

"It is grassroots, and real, and with a bit of support it can be lasting.

"Young and old, men and women, urban and rural; it's about everyone working together to find ways to look after our water quality and do their bit. It doesn't matter how small or large it is, it all helps in looking after our water, and adds up to big change. I often say that it is a bit like doing a jigsaw puzzle. All the small pieces coming together and creating something wonderful," says Sarah.

If you are interested in attending the next forum meeting or receiving email updates, please contact Dr Jane Kitson – jane@kitsonconsulting.co.nz

Sharing your **WAI**

Southland has been flooded – not literally of course – but with people discussing water and its importance to them and Southland.

Environment Southland councillors and staff have set up shop at markets, A&P shows and supermarkets across the region over the past few months, all with the goal of finding out more about your aspirations for our waterways.

The **#Shareyourwai** campaign was launched in December as part of the *People, Water and Land programme – Te mana o te Tangata, te Wai, te Whenua*. The campaign (which concluded at the end of March) included a survey and photo competition. At the various events we attended we invited people put pins into our large table map of Southland to highlight their special waterways.

If you took the opportunity to **#Shareyourwai**, thank you. There were insights aplenty from the various questions. None more so than in your ideas for what could be done to improve our waterways. Here are just some of the over 500 suggestions (see right).

People, Water and Land programme

The People, Water and Land programme is about taking the next steps to improve Southland's water and land. It is a partnership with Te Ao Marama, as the environmental arm of Ngāi Tahu ki Murihiku. The programme's vision is 'inspiring change to improve Southland's water and land'. It is part of building a more sustainable and thriving Southland.

Find out more on our website www.haveyoursay.es.govt.nz and click on Share your wai .

What do you think the first steps could be for improving Southland's waterways?

Increased awareness that it is a finite resource, we are good at taking it for granted - Tracy

Good job started with fences. Keep up riparian zones, cut nitrogen - Felicity

Look at new technology to improve runoffs and toxicity levels from farming - Jordan

Everyone picking up their rubbish. Being mindful of what wastewater ends up in our rivers and lakes - Anna

Reduce dairy herds and effluent loading. Reduce water takes - Ken

Farmers are already doing a great job improving water quality, town now needs to look at what it can do - Nicole

Keep clear of gorse, broom, convolvulus and other pest weeds, more fencing, more planting of native trees - Jeanette

Keep runoff to a minimum and stock out of it - Duane

Keep up the fencing projects around waterways and protect from pollution from fertiliser - Paula

Place more rubbish bins around waterways - Marshall

Getting everyone in the community to come together and become aware of the issue - Scott

Improved farming practices (not only dairying, every farming type). Tougher penalties and more education - Richard

Your Regional Forum members announced

Earlier this year, Environment Southland began the search for Southlanders with a keen interest in their communities and the future of our water to put their names forward to join the Regional Forum.

The Regional Forum is a community based group that will 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 will consider on-ground initiatives as well as the specific policies and rules required to make change and improve Southland's water and land for generations to come.

People, Water and Land programme Regional Forum Lead Rhiannon Suter says that following an intensive recruitment and selection process we can now announce the successful candidates.

"We're pleased to announce 17 people as members of the Regional Forum," Rhiannon says. "I want to say a huge thank you to all those who applied. The calibre of applicants was incredibly high. We are very lucky to have so many people willing to contribute to ensuring Southland continues to thrive into the future."

The information gathered from the survey, photos and map from the recent community engagement will be invaluable for the big job ahead of the forum. Over the next couple of years key decisions need to be made on how we improve the state of our waterways and estuaries for generations of Southlanders to come

"The forum will use the information gathered from the community over recent months and put forward recommendations. Those recommendations will have implications for us all," Rhiannon says. "How much it costs to treat our wastewater, stormwater and drinking water, and what controls there are around land use activities will be important parts of these decisions."

The work programme for the forum kicks off immediately and will involve a mix of field trips to look at issues on the ground, expert advice, and workshops. It's expected the group will meet every three months (or more as required), completing their recommendations by 2022.



▲ Councillors Jeremy McPhail, Lyndal Ludlow, Environment Southland Chairman Nicol Horrell, Te Ao Marama Chairman Don Mowat and member Gail Thompson make up the Regional Forum selection panel.

Regional Forum members

- ▶ Mata Cherrington
- ▶ David Diprose
- ▶ Kelsi Hayes
- ▶ Bernadette Hunt
- ▶ Jane Kitson
- ▶ Joyce Kolk
- ▶ Jade Maguire
- ▶ Paul Marshall
- ▶ Glen McMurdo
- ▶ Philip Morrison
- ▶ Lisa Pearson
- ▶ Estelle Pera-Leask
- ▶ Ewen Pirie
- ▶ Michelle Roberts
- ▶ Hayden Slee
- ▶ Fiona Smith
- ▶ Vaughan Templeton

Southland's Water Story

To guide Southland on our journey with water, we have launched an online and interactive Water Story. Evolving over time, the Water Story will provide details about the state of our waterways, and information and advice on how we can all look after them.

To begin with, we've developed an infographic introducing some of our monitoring information collected from across the Southland region (on the next two pages). You can find an explanation of what this data means and how we got to these numbers on our website. Catchment-specific versions are also on there.

We all know that water is vital to us. Our health and cultural wellbeing, ecosystems and economy are all supported by it. We use freshwater to drink, to produce goods and services, and enjoy for recreation. For Māori, freshwater is a taonga and fundamental to the cultural identity of iwi and hapū.

Acknowledging all that water gives to us, we also need to consider what we can give back to it. Southland's Water Story is all-of-our story and each of us has a role to play.

Much like a lot of Aotearoa-New Zealand, Southland has undergone dramatic change over the past 150 years. By better understanding how land and water use has changed in Southland and where that change has occurred, we can better understand the complexities of environmental challenges within the region and choose actions that work to maintain and restore it.

What water gives to us?

From the river to the sea 💧

The Mataura River is a recreational playground and a living classroom for the children and young people of Otama School.

Situated approximately 20 kilometres north-west of Gore, the school has been supporting students to care for and study the Mataura River for some time now; learning invaluable lessons about the environment and life. A member of Enviroschools – a national programme that supports children and young people to plan, design and implement sustainability actions important to them and their communities – Otama School was the first in Southland to receive Enviroschools' top award, Green-Gold status.

"We're a sustainable school. We do our own paper recycling, we make sure there are no weeds in the garden, and we make our own compost," says Christopher, a Year 8 student. "We enjoy doing stream studies too; catching bugs, studying them, and putting them back. There's lots of stuff to learn down there [at the river]."

In recognition of all their environmental work around the Mataura River, Otama School recently won the Otago-Southland Aquavan grand prize. This saw the school travel to Portobello, Otago and visit the University of Otago's Marine Lab. Otama School principal Samuel Smith says the trip was instrumental in connecting their river studies to the bigger picture.

"The river is a good subject to base a lot of learning around. Having it close by means having the opportunity to engage with it. It's good for the kids to have a connection with their surroundings. They can also learn about the consequences of their actions, through the metaphor of the river being connected with the sea," he says.

The benefits of their sustainability efforts extend further than the environment too. "It gives them something to be proud of, a point of difference. And it's great to have that sense of community."



▲ Otama School students (from left): Christopher, Xander, Sophie, Iannang, Nicole, Christopher, Molly, Bakeua and Jack.

Water Story

Water – it’s a family thing



▲ Jane Milne

Southland schoolteacher Jane Milne is appreciative of the many things our local rivers and lakes give to her, though it’s water’s ability to connect her with family and provide a sense of place that stand out the most.

Jane’s relationship with water began early, first with swimming and then through sailing with her family. During the holidays, more often than not, time is spent near or in the water.

“A lot of family holidays are around water. Whether it’s gold panning along the river or walking alongside it under the shade of the trees. Water is a connection to spending time with family. I’m now passing that onto my children”.

Jane says that water also gives her a connection to place. “Going to Arrowtown, where my mum is from, and walking along and following the river – it feels special going there.”

Jane has noticed a change in some of the local waterways and, along with her family, is taking personal steps to help safeguard them for future generations. “If we see rubbish lying by the river, we pick it up and take it away. It’s so important to change our ways.”

Kaitiakitanga

“Kaitiakitanga – it’s a responsibility, not a privilege”, says Stewart Bull.

Based on the idea of humans as part of the natural world, kaitiakitanga is a worldview of environmental guardianship and protection. “It’s not just a responsibility for Māori, it’s for everyone; it’s about community. If we can all take on this role, we can all benefit.”

Stewart (Ngāi Tahu, Ngāti Māmoe, Waitaha) has been working in the community and on conservation matters in the Southland region for many years. A member of the Southland Conservation Board, a board representative on the Murihiku Kaitiaki Roopu, a member of the Whenua Hou Committee, and a founding member of the Fiordland Marine Guardians, Stewart was awarded the Queen’s Service Medal for his services to conservation and Māori in June last year.



▲ Stewart Bull

“We have to think about the big picture – is this practice sustainable? There are always consequences. We have to think about the things that we are doing – walking in the river, washing our cars. We have to think, ‘What are the consequences? Where is it going?’ We have to understand that,” he says.

Stewart believes that we also need to promote the idea of environmental capital in the same way one might consider financial capital. “If you invest money in the bank, you wouldn’t quickly take it back out again. You can only take so much. And you can’t take out more than what can be sustained.”

When thinking about wai (water), Stewart says the health and wellbeing of our ecosystem is reliant on it to survive.

“I see it functioning in the same way as our veins. Water is like blood, our lakes and rivers are the veins. I wouldn’t compromise my blood, there would be consequences to my actions. Likewise with water.”

Just as water is vital to our ecosystem, so too are all of our roles in looking after our environment.

“You put the whole jigsaw together and you see what’s missing. It’s a big jigsaw for the whole lot of us. If everyone just does a wee bit though, then we have an accumulation of doing the right thing.”

Southland's water story

53%
Conservation land
(national parks)

Consented water takes
Irrigation
31%

Consented water takes
Stock
16%

87%
Farming of developed land

Stream insects, worms and snails %
(macroinvertebrates)
81 sites

- 18 Very good
- 36 Good
- 37 Fair
- 9 Poor



34,000 km²
Southland region

Nitrogen in groundwater
23 sites

13%
Improving
65%
Worsening

Consented water takes
Industrial
32%

Health of Southland's estuaries
9 monitored sites

- 1 Very good
- 2 Good
- 2 Fair
- 4 Poor

25
Estuaries

Phosphorus
in rivers
1 sites
43%
Improving
0%
Worsening

Toxicity %
(nitrate)
55 sites
53 Very good
31 Good
16 Fair
0 Poor

Nitrogen
in rivers
34 sites
3%
Improving
32%
Worsening

Swimmable
Rivers (*E.coli*)
38%
Excellent

Swimmable
Lakes (*E.coli*)
80%
Excellent

30+
Landcare and
catchment groups

468 km
Stop banks



Consented
discharges
of wastewater
to water
49

Consented
discharges
of stormwater
to water
46

4
Runanga

Consented
water takes
Town supply
21%

Water quality
at marine
shellfish sites
8 sites

1 Very good
0 Good
0 Fair
7 Poor

3,400 km
Coastline

Algae %
(periphyton)
41 sites

30 Very good
26 Good
32 Fair
12 Poor

4
Main river
catchments

The Environment Southland monitoring sites represented here are those that had sufficient data for assessment.

To find out more about what these numbers mean, how we got them, and why we chose to represent them this way, go to www.es.govt.nz. It's here you can also learn about the many other things that make up Southland's water story, like climate, soils and land use.

Improving:
Levels are decreasing

Worsening:
Levels are increasing

Indeterminate:
Trend direction could not be determined

Published 2018

For more information go to www.es.govt.nz

Saving time with trapping technology

Wireless technology is set to keep farmers one step ahead of predators in the Waituna catchment.

About 160 traps with wireless nodes have been deployed in the Waituna catchment this year as part of the Predator Free Waituna programme, which is partially funded by the Department of Conservation.

The traps are designed to catch mustelids – stoats, ferrets, weasels and rats – and provide a great alternative to current more manual trapping options. A signal from a sprung trap is transmitted to a hub mast in the catchment and sent as a message to the person monitoring it via computer or smart phone app.



Niel Fourie, who is a contract milker at Foveaux Investments' farm at Waituna, says he's right behind predator control efforts and the wireless technology will be a big time saver.

"You don't have the time to check 40 traps."

The 310 ha farm features two protected native bush areas, meaning predator control is a vital element of farm management.

Niel says the application of wireless technology is increasingly important across many aspects of farm operations, allowing farmers to accurately measure inputs and outputs.

◀ From left: Simon Croft (of Encounter Solutions who developed the wireless trap technology), pest control contractor Raoul Thomas and biosecurity officer Craig Smith with some of the new traps being deployed in Waituna.



▲ Waituna contract milker Niel Fourie is excited about the wireless technology being used in the predator control project.

The trapping programme is also helpful to protect the eggs produced by their free range chickens, he says.

Contractors and Environment Southland staff are keeping them well informed of progress and developments, he says. An initial possum control round last year also seems to have been very successful.

In 2018, almost 3000 possums were removed from the Waituna Pest Control Area in an initial control round.

Environment Southland biosecurity officer Craig Smith says the wireless traps are fantastic because they allow people to isolate a trap that has been activated, saving a lot of time and energy.

Being able to isolate a sprung trap – as opposed to having to check a whole line of traps – also meant traps could be

reactivated faster, so they were ready and waiting when the next predator comes along.

The app allows the person clearing the trap to record the location, what was caught and even to take a photo, for data collection to assist with future pest control efforts.

Craig says the next phase is fine-tuning the technology.

Predator Free Waituna has several benefits and goals – improving biodiversity; reducing economic loss to crops, pasture and trees; limiting the risk of bovine Tb and toxoplasmosis transmission; limiting predation of domestic chickens and waterfowl; supporting the Department of Conservation's efforts to control pests on the conservation estate, and protecting rare native species.

Like the Possum Control Areas programme, the set-up is done by Environment Southland with farmers taking over monitoring once it is up and running. Environment Southland will continue to offer support and assistance where needed.

The biosecurity team hopes to have all the traps fully operational over the next few weeks and it will meet with the farmers involved as the trial advances to ensure they are kept informed of developments and educated around how they can be involved.

The wireless technology is being used increasingly around New Zealand, including for some predator control efforts on Stewart Island/Rakiura.

An insurance policy for our native species

Seed banking is like most forms of insurance – you hope you never need to use it, but it is becoming increasingly valuable as biosecurity threats jeopardise native species.

Southland QEII field representative Jesse Bythell says threats like myrtle rust have become more common in recent years and seed banking is like a “doomsday insurance policy” that might one day provide the rare opportunity to regenerate a species that has been devastated.

The New Zealand Indigenous Flora Seed Bank has been operating for several years, but the kauri die-back and myrtle rust outbreaks have both highlighted its importance in protecting the future of biodiversity.

In Southland, Department of Conservation botanist Brian Rance joined Jesse last year to collect material from the heart-leaved rohutu (*Lophomyrtus obcordata*) – a member of the myrtle family found in Southland and at risk from myrtle rust.

To the casual observer heart-leaved rohutu can look like many other small-leaved native shrubs, but few people realise it has the same threat classification as kākāpō. Due to the threat of myrtle rust, the New Zealand Indigenous Threat Listing Panel recently elevated the threat status of all 26 of our native myrtle species.



Policy for S

Brian and Jesse were given access to John and Rhonda Cowie's Central Southland property to collect the seeds.

"Their generosity in allowing us to collect seeds was vital to the success of this particular mission, because the plants in their covenant are younger and growing in the open and producing a lot of fruit," Jesse says.

Because heart-leaved rohuu is well-camouflaged and its distribution is patchy, finding the right plant at the right time was a challenge for seed banking. It was also important that specimens collected were free of obvious signs of myrtle rust (Brian has training in myrtle rust detection).

While carrying out their seed collecting task, Brian and Jesse at times felt like characters in a Mission Impossible movie plot – carefully manoeuvring a pruning device on a long pole high above their heads to collect heart-leaved rohuu from shrubs which were too fragile to climb and whose canopies were sometimes too tall to reach.

Many of the seeds of our native myrtles are dry and unrewarding for our native birds, but some such as heart-leaved rohuu and bush rohuu (*Neomyrtus pedunculata*) are fleshy – so getting the fruit before the birds added more pressure to the seed collecting mission.

Jesse says while seed banking seems like a simple solution to potential threats, it's not as easy as it sounds.

"Not all seeds can be easily banked, and success depends on a number of factors.

Left: Southland QEII field representative Jesse Bythell at the Cowie's Central Southland property.



▲ Southern rata, a member of the myrtle family.

Some species cannot handle the drying and freezing process of conventional seed banking and new scientific techniques are currently being developed to hopefully overcome this challenge. Seed banking is definitely not the answer to the threats, but more of a back-up for the worst-case scenario. We still need to be doing everything possible to prevent these incursions and stop them spreading when they do make it here.

"Unfortunately it is our most vulnerable species which are the most difficult to seed bank and seed banking everything would take a lot of time and effort, so we can't let our guard down."

Jesse says although myrtle rust hadn't been identified in Southland when they carried out the seed banking, it would be unrealistic to think we were protected from it.

"We can't see ourselves as isolated from risk, so we need to do everything we can. A biosecurity threat is not just about losing a species, we don't always understand the bigger picture - the impact of each individual species on our ecosystem services - and that can be really undervalued."

Myrtle rust

A wind-borne fungus which can be present in plants which do not display symptoms, so detection is difficult. Eradication is deemed impractical, but there are some steps we can take to ensure we limit the impact of this invasive fungus:

- Learn to identify myrtle species so you can look out for myrtle rust. Southland has six native species, but the rust can also affect introduced species in the myrtle family – www.myrtlerust.org.nz
- Don't touch! Don't collect samples as this might spread the disease.
- If you can, take a photo of the rust and the plant it's on.
- Phone MPI's exotic pest and disease hotline 0800 80 99 66.
- If you accidentally come in contact with the affected plant or the rust, bag your clothing and wash clothes, bags and shoes/boots when you get home.
- Also consider limiting the use of myrtle species in restoration projects.



(Photo courtesy Biosecurity New Zealand)



▲ Asha Rickard, Cheyda Tonihi and Amaia Cooper with the stencils they made to protect streams.

Oi, this drain comes to me!

Students at Waverley Park School focused on water for an entire year, and have come up with their own creative way to protect streams.

It all started at the end of 2017 when deputy principal Helen Kennedy saw students washing their paint brushes on the concrete after an outdoor arts project.

“I saw the paint going into a stormwater drain – and almost died. I thought oh my gosh, the kids have no idea where that drain goes!”

The following year, the school-wide theme was *kaitiakitanga* – caring for the environment, and four classes chose to do an enquiry on water quality.

They came up with the idea of creating their own messages to paint on stormwater drains, to educate and remind people that anything going into stormwater drains ends up in the closest waterway.

“We had a competition for designing our own stencils, and the students voted on the ones they wanted to put on the drains around our school. The stencils were laser-cut by our own amazing crafty caretaker.”

The stencils are the product of a year-long learning journey. By the end of the

last school term an action plan had been developed for how the students were going to make a difference and reduce stormwater pollution.

“We first spent two full terms building up the kids’ science knowledge around water. They learned about the water cycle, food chains, and what a freshwater ecosystem is. We were guided by the *Stream Connections* resource from Environment Southland, which is just fantastic.”

Helen says stormwater was something the students could relate to as a school as they have many drains on their school grounds.

“We contacted the City Council to find out where all the stormwater pipes went. They supplied a map of all the drains in our neighbourhood, and it turns out the drains end up in the Waihopai River, which is close to our school.”

The students did an investigation of how drains work, what a sediment trap is and the importance of a grate.

“They made a collage of photos of what was actually down some stormwater drains and it was just revolting. Things like nappies, plastic cups, straws and all sort of things, so they got an idea of stormwater pollution and contaminants in drains.”

Two days before school shut, the children went around the community in teams painting the stencils, and they rounded out the year with a picnic and native tree planting at the Waihopai River.

“It was a nice celebration of everything we’d done and a chance to get together with our whanau,” says Helen.

She says the lessons are something the children will probably continue to take with them for the rest of their lives.

“One of the classes in the school that hadn’t been part of the enquiry and was cleaning up

their room, and all of their soaps and suds were going down the drain. My class came running and said ‘Helen, the kids next door! They’re polluting our stormwater drains!’ And I thought ‘oh my gosh, this is really working!’”

She could also see that the lessons were starting to influence what happens at home, which was encouraging. In one instance, a child was walking home and noticed somebody washing their car on the street, and immediately made the connection why they shouldn’t do that.

“I believe that once the kids get it, the parents will get it.”

The school has since generously gifted the stencils to Environment Southland to lend out to other schools.

If your school is interested in learning about water, or if you would like to lend the stencils, talk to our education team. Call 0800 76 88 45 or email education@es.govt.nz.



▲ Awareness messages were painted on drains in and around Waverley Park School.

What is Stream Connections?

Stream Connections is an educational resource for teachers that contains information about freshwater and water quality in Southland. It includes classroom activities, curriculum links and step-by-step instructions for taking action.

A free copy is available from our website – www.es.govt.nz



Stream Connections
Teacher Resource



? Did you know?

In a city or town, rain that lands on roofs or roads does not soak into the ground. Instead, it flows into stormwater drains, and from there into nearby creeks, streams and rivers.

Updates



Proposal for a Southland Regional Pest Management Plan



Pest Plan

A hearing for the Proposal for a Southland Regional Pest Management Plan was held in February, with 27 submitters opting to present directly to the hearing panel.

The proposal, which was released for public consultation in August 2018, sets the scene for the management of biosecurity in Southland for the next 10 years. It proposes rules for 72 specific pests, along with good neighbour rules for species such as gorse, broom, ragwort and nodding thistle.

The hearing panel will now consider all submissions, both written and oral, and recommend a final version of the plan to council for approval.



Mana whenua positions

Environment Southland chairman Nicol Horrell (right) and Te Ao Marama board chairman Don Mowat (left) welcome newly created mana whenua positions on Council committees agreeing that they demonstrate the strengthening relationship between Council and iwi.

The appointment of up to two positions on both the Strategy and Policy, and Regional Services committees follows a long period of investigation and discussion with Te Ao Marama about improving the opportunities for involving Māori in Council's decision-making. Te Ao Marama will provide the names of suitable candidates who will be formally appointed and granted voting rights, remunerated and subject to accountability and Code of Conduct requirements on the same three-year cycle as elected members.



Unwanted agrichemicals?

If you have unwanted or expired agrichemicals, there's an opportunity to have them safely disposed of for free this year.

The Agrecovery programme, with support from Environment Southland, will be hosting a chemical collection event in Southland in 2019. Agrecovery provides free recovery of agrichemicals and the recycling of agrichemical containers from participating brands. Agrichemical containers should be triple rinsed and under 60 litres in size.

All you need to do is book them in via the Agrecovery website or call 0800 247 326. For more information go to www.agrecovery.co.nz

Time to think about...

APRIL

FIREWOOD – If you haven't got your firewood supplies sorted yet, it's time to give it some thought. Dry firewood is difficult to source once winter hits, so check out our Good Wood approved suppliers at www.BreatheEasySouthland.co.nz



VELVETLEAF – Although velvetleaf hasn't been identified in Southland for some time, the seeds can remain dormant for years, so it's important that all farmers continue checking their crops for any signs of it. If you find it, contact MPI on 0800 80 99 66.

WINTER GRAZING RULES – A reminder that new rules for intensive winter grazing become operative on 1 May 2019, so if you need advice or information about how this might affect you, don't hesitate to give our consents team a call.

MAY



RABBITS – Winter is the most effective time for rabbit control before they start breeding again in spring.

OUTDOOR BURNING – Outdoor burning is prohibited in the Invercargill and Gore airsheds from 1 May until 31 August. Leisure activities like barbecues, braziers, hangi and fireworks are exempt from this rule.

JUNE

MUSTELIDS/RATS – When you are out at your duck pond during duck shooting season, remember to set and check traps for mustelids and rats.

ENVIRONMENTAL ENHANCEMENT FUND – Get your application in now. This fund can assist with projects to protect and enhance indigenous biodiversity on private and community-owned land in Southland. Visit www.es.govt.nz for more information on how to apply.

Down on the farm



By **NATHAN CRUICKSHANK**
Principal land sustainability officer

Southland is a unique and great place to live and work. I feel blessed to be in such an amazing province.

Most years the land sustainability team at Environment Southland get involved in a conference for the New Zealand Association of Resource Managers. (NZARM) It is a conference where people involved in resource management visit a different region and learn about threats and opportunities for the region, along with new advances in technology that can help us better manage our natural resources.

Two years ago we hosted the NZARM conference here in Southland and were congratulated with positive feedback from people all around New Zealand. This leads me onto further encouraging you all to do your bit in looking after the natural resources of our province.

I urge Southland farmers to utilise the skills and knowledge of the our land sustainability team. They have the knowledge and skills to assist you with preparing farm environment plans and can provide you with advice on a range of good management practices that will help sustain your farming operation into the future.

For detailed information on any of these topics visit our website.

0800 76 88 45 | service@es.govt.nz | www.es.govt.nz

Out in the field



▲ Dairy NZ water quality scientist Justin Kitto and Environment Southland team leader, ecosystem response Nick Ward carry out work in the Jacob's River Estuary as part of a project looking at the sediment.



▲ Summer student Niamh Edginton and biosecurity officer Rachel Batley remove Chilean rhubarb (*Gunnera tinctoria*) from a site on Stewart Island during a visit in January.



▲ Environmental technical officers Sarah O'Neill (left) and Bee Pikia take part in water safety training earlier this year. The staff, who spend much of their days in our waterways collecting data, must update their training regularly.