

Envirosouth

Environment Southland News

December 2011



**Issue
25**

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Monitoring water quality over summer

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Tsunami risk to Southland





From the Chair

It's been a while since any new flood schemes were undertaken in Southland, so the official opening of the new flood protection works at Milford Sound last month was quite an occasion.

The Cleddau scheme has largely slipped under the radar for most Southlanders, but it's a good example of cooperation between our council, DOC and the Southland District Council that has resulted in a significant improvement in the level of flood protection for Milford Sound residents and also for the access road that brings in tourists by the thousand each year.

The first stopbanks were built on the Cleddau in the 1980s and were designed to give protection against a level of flooding that we might expect once every 50 years.

Apparently the name Cleddau comes from a Welsh word that means "sword" – there's a River Cleddau in Pembrokeshire – and our local Cleddau has been like a sword threatening to cut road access into Milford Sound by erosion and flooding for years.

The solution has been to build new river works that will provide protection

against what our hazard planners call a 1% flood – in laymen's terms, that's a flood that statistically we would expect to occur once every 100 years. At the same time, the level of the whole village has been lifted up, out of the reach of flooding from the Cleddau and also from flooding coming from Deepwater Basin.

There is a small amount of flood protection work still to be completed and once the 12-months of post-construction maintenance is over, Environment Southland's catchment team will take over responsibility for maintaining the works, in the same way that we maintain all of Southland's major flood schemes.

We know from experience in other parts of our region that when a flood protection scheme is fully effective, communities can get complacent – the stopbanks and other flood protection works do their jobs so well that people forget what happens when they're not there. That's why ongoing maintenance is very important, to make sure that the scheme's assets are kept to the highest possible standard.

Finally my best wishes to all for a safe and happy Christmas and holiday season.



Chairman Ali Timms.

I hope you all get the chance to spend plenty of time enjoying Southland's great outdoors.

Ali Timms
Chairman
Eastern-Dome Constituency
(03) 248 7222

Cover picture:
Bluff Harbour from Greenpoint,
Garry Telford.



Rock protection has been placed along the banks of the Cleddau River to stop erosion which was threatening the village and the Milford Road. Photo: Noel Hinton.

Summer water quality



The safety of Southland swimmers and stomachs are the focus of Environment Southland's bathing and shellfish gathering monitoring programme again this summer.

Monitoring has just started at an array of different locations across the region, with testing beginning on December 5 and 6.

Coastal Scientist Greg Larkin says the sampling will continue until March and has one simple goal: to check whether it is safe to swim and safe to eat food from Southland rivers and coast.

Problems that compromise water quality can include sedimentation, bacterial or fungal contamination from several different sources. The monitoring regime takes in seven freshwater bathing sites, 13 marine sites and eight shellfish gathering sites in the region, all of which will be regularly checked.

Six of the seven bathing sites will also be monitored for cyanobacteria levels, which were found to be elevated in 2009.

As a rule, water quality deteriorates after heavy or persistent rain, when pollutants are washed off the land and into rivers and streams. That's why Public Health South and Environment Southland both recommend that people avoid taking shellfish for five days after heavy rainfall and high river flows.



Coastal scientist Greg Larkin with some of the water quality signage we'll be using this summer.

Posters showing the results from our freshwater monitoring will be displayed at 30 to 40 locations around the region and if you're visiting Riverton then watch for the sign with a traffic light system which will give frequent updates on whether the shellfish there is safe to eat.

Our scientists will also be carrying out investigations at three different places around the region to establish sources of persistent contamination, Greg says.

These are in Bluff Harbour and the Waikaia and Waikawa catchments where stormwater, wild fowl and agricultural contamination will all be under scrutiny.

You can stay up-to-date with the monitoring results by following advice on signage at swimming spots, online at www.es.govt.nz and through our automated telephone information service, phone (03) 211 5010 – there's no charge for calls to this number if you're within the Invercargill free-calling area.

We'll see you at Waimumu



When you're coming to the Southern Field Days at Waimumu in February, be sure to visit the Environment Southland tent.

It's a great opportunity to chew the fat (or chew someone's ear if that's what you want!) on everything from possum control to irrigation and the state of your bore.

You can get practical advice on shelterbelts and riparian planting and even get some hints about making persuasive submissions to the many policy and plan reviews that are underway.

We're also planning to launch the final part of our State of the Environment

Report on fresh water – *Our Uses* – at the field days.

If that all sounds exhausting, you can sit down and have a cuppa or a cold drink too.



A day in the life of a Compliance Officer



Compliance Officer Michelle Te Maro checks the k-line irrigation system on a Southland dairy farm. Photo: Sam McKnight.

As Michelle Te Maro noses her Environment Southland truck into the driveway of a dairy farmer's property, in her mind she hopes for and expects the best.

Michelle is at the pointy end of the Council, in probably one of the most maligned roles, as a Compliance Officer.

Actually it shouldn't be that way, she says.

"If I have a positive attitude and so does the consent holder there's no reason for anything other than a good-natured encounter".

Three R's define Michelle's take on her job – relationships, rapport and respect.

"If I can build up trust between myself and a farmer, it goes a long way."

Michelle's average day begins by compiling a list of the consents she'll

randomly inspect – today it's only dairy farms but at any other time that could include anything from coal mines to whitebait stands.

Today four farms in the Oreti area are on the agenda, just four of around 270 that she'll visit in a year.

"And that's just the routine inspections, if there's any problem on the first inspections there'll have to be follow-up visits. In some cases farms will have to be visited three or four times."

So far there has been about 17 percent non-compliance this year. When that happens the workload gets bigger: more farm visits, more paperwork – it goes on, she says.

"I prefer it if everybody behaves, it's better for everyone – the farmers, me and most of all better for the environment."

On the farm Michelle methodically runs through her check-list in a fashion akin to a warrant of fitness inspection and ticks boxes once she's sure that what is happening on the farm fits in with what it says on the property's resource consent.

One of the farmers visited says, although there are many who react differently, he has no problem when a Council truck arrives.

"If you know you've done everything right, there's nothing to worry about."

Today he has been right not to worry; Michelle awards top marks - a grade 1 – and not because of the farmer's kind remarks.

It was a good set up she says. There was plenty of room left in the effluent storage pond, the stone trap was clean, the effluent disposal field was in good shape with no evidence of over application, so too the disposal system itself.

She even takes GPS co-ordinates at the closest point of irrigation to a waterway, then fills two plastic bottles up and downstream from that point to be sent



Michelle collects a water sample as part of the dairy farm inspection.



away for examination and to see if there's any evidence of effluent run-off.

The grading for the farms range from 1 to 10, 1 being a slick operation without any issues found to 10 where there's something seriously wrong, she says.

If it has to be done Michelle says she will award a bad grade. She doesn't like to but it's part of the responsibility she's taken on.

She owes it equally to the consent-holders to treat them fairly in a professional manner, to herself and to the environment that, for her, remains the priority.

Sometimes there can be a hostile reaction to a poor grade, but she accepts that comes with the territory – "no-one likes getting a speeding ticket either".

On this day three out of four farms were graded 1, the fourth a 2, for having an

effluent irrigator set slightly too high, a problem which she explained to a farm worker, who immediately resolved to get it remedied.

"As much as anything else education is a big part of the job, it's important that if I see a problem they also know how it can be fixed."

For Michelle the inspections and dealing with people are the easy part, being out in the field the most rewarding.

"Look out there", she says, indicating the view across a horizon of lush pasture stretching to the Takitimu Mountain Range. "That's the view from my office window".

Perhaps a declaration made a little too optimistically as she returns to a desk with a much less appealing view of an asphalt carpark, to complete the dizzying amount of paperwork that's required post-inspection.



Back at the office, Michelle Te Maro labels samples ready for dispatch to the laboratory where they will be analysed.

Compliance Monitoring Report proves a popular read

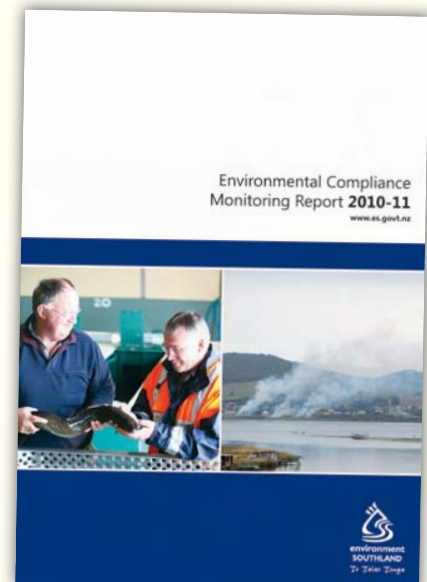


Next to the ever-popular Rivers and Rainfall section on our website, our annual Compliance Monitoring Report is one of the most frequently downloaded links.

The latest report has just been uploaded, with details about what our Compliance staff have been dealing with over the 2010-11 financial year, and how well consent holders have been complying with their consent conditions.

Containing everything from coal mines and whitebait stands to dairy farms, the report provides a snapshot of a range of different activities and how they measure up against the requirements of their resource consent.

You can read it any time at www.es.govt.nz phone 0800 76 88 45 or e-mail service@es.govt.nz if you'd like your own copy of the report.



Working away at Waituna

Regular readers will recall that we've been writing about the Waituna Lagoon in every issue this year, as Environment Southland leads an inter-agency response to prevent the lagoon from "flipping".

This time we're highlighting two projects that are critical parts of the response.

The Waituna Lagoon is part of the internationally recognised Awarua wetlands. The Lagoon is one of the best remaining examples of a natural coastal lagoon in New Zealand and is unique in Southland and New Zealand. It is highly significant to Ngai Tahu, fishermen, hunters and local landowners.



Taking samples like this could be a thing of the past with new technology planned for the lagoon this summer. Photo: Sam McKnight.

Technology to help lagoon science

Environment Southland is planning to install a monitoring station in the Waituna Lagoon this summer, providing real-time data about water quality and weather conditions.

It will provide data on dissolved oxygen levels, temperature, salinity and turbidity in the lagoon, as well as wind, sun and air temperature data from the climate station.

The Council has applied for funding from the Ministry for the Environment Clean-up fund to pay for the \$50,000 cost of construction and installation.

Environment Southland Coastal Scientist Greg Larkin says that one of the main advantages to the station's real time data would be the ability to know what's happening straight away. The current method of sampling means it takes 10 days between when the samples are taken and when the results are received back from the laboratory.

"A lot can happen in that time," Greg says. "The real time data will show if there are any phytoplankton or algal blooms in the lagoon. The equipment will measure the pigment levels in the water and if there is a bloom, we can measure its length and consider opening the lagoon to reduce the risk of flipping."

As well as the water quality equipment and climate station, there will be a webcam, some protection from vandalism, an aerial and a place for mooring a boat alongside.

"The station will be modular so it can be dismantled and moved if necessary," Greg says. "It will be about 4-5 metres high, plus a 6 metre aerial."

Monitoring stations like this can be found across the world, but most sit in 40 metres of tidal water. "The best example would be Rotorua Lakes, but this station is different because it will be in water that ranges from 3 metres down to a half a metre of water depth when the lagoon is open to the sea."

Erosion an important issue

Environment Southland Councillors recently attended a tour of the Waituna catchment, organised by Federated Farmers. Councillors were very pleased with the activities they saw, and the enthusiasm shown by the farmers involved.

One major issue for the catchment, highlighted on the tour, is the erosion along the Waituna Stream. This is one of the many projects outlined in the Council's application to the Ministry for the Environment's Clean-up Fund.

Extensive reconstruction of eroding stream banks (called rebattering) and rock armouring of bends is required on the Waituna Stream and tributaries

to stop sediment entering the Waituna Lagoon.

If the application is successful, \$1million of funding will be spent on the rebattering work over the next few summers.

Environment Southland has applied for funding to support the work being done by the Lagoon and Catchment Technical Groups to establish water quality limits for the lagoon and catchment, and work out what these limits mean for landowners within the catchment. Funding has also been sought for a variety of options that exist to reduce the contaminant loads in the lagoon, including stream bank rebattering, constructed wetland and sediment trap trials and the opening of the Lagoon.

Project Manager Warren Tuckey says Environment Southland is very grateful for the letters of support for the application that have been received from a number of the project's stakeholders. "We hope to be advised of the outcome of our application prior to Christmas."

Copies of all Waituna technical reports, newsletters and updates are available on our website www.es.govt.nz.

If you would like to know more, please contact us. Write, email, call, or fax any questions you may have. There is also more information on our website, www.es.govt.nz.



Erosion like this will be the focus of rebattering work on the Waituna Stream.

Summer boating



Safe boating on Lake Te Anau – everyone's wearing a lifejacket and the boat is properly identified. Photo: Barry Harcourt.

Southern boaties have made a good start to the summer and will make Environment Southland Deputy Harbourmaster Lyndon Cleaver a happy man if they continue to practice safe boating habits into the Christmas holidays.

Council staff have already been out in force carrying out navigation safety patrols in northern Southland and have been generally impressed with boatie behaviour so far.

They patrolled Lakes Te Anau and Manapouri over Labour Weekend, which signals the start of the boating season for many.

Lyndon says he and his team paid particular attention to the most popular boat ramps, where they gave boat owners advice about the Navigation Safety Bylaws.

Although compared to past years the number of vessels was down, he was pleased to see that most were complying with the bylaws.

The most common problem areas were a failure to show identification marks on the boat. For over a year now it's been compulsory for all vessels to show clearly identifiable marks. This can be as simple as its radio call-sign, a trailer registration, boat club member number or something else that the harbourmaster has approved.

Lyndon said there were only a few minor indiscretions relating to vessels breaching speed limits in restricted areas over Labour Weekend, and he hopes to see similar good conduct during the summer.

"There's just as much fun to be had on the water when you take all the necessary safety precautions," Lyndon says.

Other bylaws that are designed to improve boating safety are that everyone on board a vessel under 6m in length must wear a well-fitted lifejacket; all boats must have at least two means of communication on board and be capable of still working if submersed in water. This could be as simple as a cellphone in a snaplock plastic bag.

Prudent boaties also check the weather forecast before they set out each day, and leave their alcohol behind on the beach to enjoy when they get back to shore.

"The rules are only there for one reason, and that's to help people survive in what can be an unforgiving environment."

You can check all the Southland the Navigation Safety Bylaws on our website www.es.govt.nz.

Creative mind meets science



With water quality commanding increasingly more attention in Southland – spare a thought for Kirsten Meijer who is up to her ears in it every day.

As an Environment Southland Water Quality Scientist, Kirsten's main job is monitoring and recording the screeds of information that whizzes through the ether from the Council's monitoring sites across the province and into her office. Kirsten's attention is directed towards the State of the Environment water quality programme for the region's freshwater stocks – streams, rivers and lakes - charting any changes in algae and macroinvertebrate levels.

Summer does bring more chances to get out in the field but otherwise Kirsten is in the office crunching the numbers, trying to pick up on trends and changes in the biology of Southland's water and the life it harbours, and transferring those findings onto paper.

"It's a job I can really say is varied and offers something different each day - dealing with the people in the real world and having to relay scientific information to everyone from colleagues to Councillors, farmers and MPs."

The title of Water Quality Scientist is one that didn't immediately grab Kirsten's attention growing up, but she says she had an affinity with water from a young age.

However, a job based on logic and regimen is one she had to tune her brain into.

Kirsten's primary education was done through a Rudolf Steiner School, which was renowned for teaching children to think in a creative, if not abstract, way. It was a far cry from the learning



Kirsten Meijer knee-deep in mud in the Invercargill Estuary to install sediment plates as part of the Council's monitoring programme.

methodology at her Catholic high school, as she found on her very first day.

"I'd never written on lined paper before. I wrote in the middle of the page and drew a border of flowers all around it. The teacher had to sit me down and explain how I was meant to do it."

The ultimate credit for Kirsten's dip into science goes to her seventh form biology teacher at Baradene College in Auckland. She says it was Mrs Hayward who provided the formative influence that developed into a love of science which in turn led to a career, "since that point it all just seemed to fall into place".

Fortunately Kirsten says she has retained the ability to think creatively even now, after five years studying for a Master's of Science degree and the progression into the workplace.

"I think it has enabled me to approach problems from a different direction sometimes, so I think it is beneficial in that way."

It's now been five years since she moved south to take up her position at Environment Southland and she's resolute when she says she enjoys her job – "I really do".

Now she feels her brain is somehow wired into investigating what's going on with water wherever she goes. She finds herself taking note of what's going on, without consciously meaning to.

"I can be going for a run around the estuary lagoon and find myself scanning the water for any problems, - I guess now I just see the world through watery glasses."



Simple message – move straight away

“People don’t need to panic but they do need to act”, is the message being spread to coastal Southland communities about what they must do when they feel a large earthquake.

Emergency Management Southland Manager Neil Cruickshank and his team have been visiting seaside towns during the past few months to increase awareness that they are at risk from a tsunami generated by a large earthquake centred close offshore in the Puysegur Trench.

Neil says a public meeting held in Bluff recently did not draw a huge audience but he was impressed by their understanding of the threat of a tsunami.

The message Emergency Management Southland is spreading is based on the findings in a GNS Science report that shows there is a higher risk than previously thought that a damaging tsunami from an offshore earthquake could reach the Southland coast, including Riverton and the New River Estuary.

“Our aim is to get out and speak to the communities that could be vulnerable in the event of a tsunami and tell them what we can do and what the community needs to do to be prepared,” Neil says.

His team visited Riverton and Bluff in October during “Get Ready Week” and found that most people seemed to fully comprehend what needs to be done if they feel a strong earthquake.

That key point is that if people in a coastal area feel a large earthquake (lasting 30 seconds or longer, or one that makes them unsteady on their feet) they should move in-land or to high ground straight away and listen to the radio for further information. “Don’t wait for an official warning because if the earthquake is in the Puysegur Trench, the tsunami will arrive before we are able to alert the community.”

Tsunami that have devastated communities around the globe during

the past decade have generated a heightened consciousness of the awful consequences of offshore earthquakes.

Emergency Management Southland will continue to provide more specific information to coastal communities

including a public meeting at Riverton in the New Year, Neil says.

The tsunami report and more information can be found on the organisation’s website www.civildefence.co.nz.

A tsunami is not a normal wave event. It should be seen as a wall of water with very strong currents forcing the water inland.

Listen to your local radio stations, More FM (89.2) Classic Hits (98.8) and Hokonui Gold (94.8) and you will be advised further of what actions to take.

Know where the nearest high ground is and how you will reach it. Get as high up or as far inland as you can.

Develop a Household Emergency Plan and have a Getaway Kit ready.

The latest scientific research indicates that many areas of Southland may receive a 5 metre tsunami at the coast.

The tsunami wave height will be on top of the tide height at the time.

Check the inside rear cover of your 2011 Southland phone book for your survival guide or go to www.civildefence.co.nz

Tsunami image by Donna Hawkins



You’ll certainly see him coming! Gary Tong is driving the first of Emergency Management Southland’s specially signwritten vehicles, which will help spread the message that everyone needs to prepare for emergencies.

Cr Currie learns the ropes



First-term Environment Southland Councillor Rowly Currie has been out and about this spring to get a glimpse of what Council staff do day-to-day. And he says he's been blown away by the new-found insight it's provided into how staff from different parts of the Council operate.

During the past five weeks Rowly has been out with catchment staff investigating river work; accompanied water quality scientists looking at bores and water monitoring, and stood alongside a hydrologist, a biosecurity officer and even a compliance officer undertaking dairy farm inspections.

"Unlike some of the other councillors, I don't have any rural or farming experience to call on. In that respect I'm a complete novice," he says by way of explaining what has prompted him

to learn about the Council's business at first hand.

He felt the need to see for himself the inner workings of the Council and its projects to help when he makes decisions around the Council table.

"The Councillors are expected to make important decisions, so for me it's also important that I build up my knowledge to make informed decisions."

There were an awful lot of reports to read and some were hard to understand for a newcomer. Rowly says he's found that a lot of things have become clearer as a result of his five days in the field, including the knowledge and skills of the staff the Council employs.

"They're extremely highly qualified people with tremendous expertise in



their fields and really enjoy what they do. I have renewed respect for them."

Rowly accepts he still has a lot to learn about the inner workings of other parts of the Council, but now that he's had a taste, he is determined to continue the learning process.

"Whatever chance I get I'll keep going out with staff to learn as much as I can."

Time to start training for the Wai Tri



Lace up your running shoes, pump your tyres and put a ring around Sunday 18 March 2012 – the Environment Southland Wai Tri is back!

Even though there's still three months to go, course manager Robin Wilson is already planning to introduce a few changes that will add some new challenges to the tried-and-true event.

He doesn't want to give too much away but has been hinting at a new bike leg for the triathlon and duathlon, a completely new course for the 10km run and even a different stretch of river to challenge the kayakers.

The 10km walk is likely to have a course change too, to take in the newest

stretch of walking track south of the Invercargill estuary.

There are six separate events in the Wai Tri, to cater for everyone from beginners to elites:

- Full multi-sport event (kayak, mountain bike and run)
- Full duathlon
- Novice short-course duathlon
- Kids duathlon
- 10km run
- 10km walk (non-competitive)

Entries will open next year but now is a great time to start your training programme.

Keep an eye on our website and our Enviroweek column in *The Southland Express* and *The Ensign* for more information, or you can e-mail service@es.govt.nz and we'll send you an entry form.



Environment Southland Chair Ali Timms with fellow Councillors Neville Cook and Maurice Rodway (in the kayak) are among those who will be training for the 2012 Wai Tri.



Unusual illness affecting Southland fish

A bacterial infection which has been found in Southland's kanakana could have been present in southern waters for some time before its appearance was detected.

The kanakana – also known as lampreys – appeared to have red coloured fins and red contusions on their bodies. The illness was striking and appeared to be widespread in the migrating population. Rewi Anglem, kaumatua and chairman of the Hokonui Runanga, first noticed the markings and said he had not seen anything like them before.

MAF scientists have tested the fish which were brought to Environment Southland. They have identified the infection as the bacterium *Aeromonas salmonicida*. Kanakana from the Matura, Mokoreta and Waikawa Rivers have been affected, as have two trout from a hatchery on the Taieri River in Otago.

The *Aeromonas salmonicida* cultured from the trout was confirmed as not "typical" but scientists have yet to determine whether it is the "atypical" strain, because it is notoriously difficult to culture in a laboratory. The 'typical' version is the form that would be of most concern to the marine farming industry. At this stage MAF cannot be sure that the strain/type of *Aeromonas salmonicida* bacteria isolated from the trout is the same as that causing disease in the lamprey.

The bacteria is widespread overseas, but has never been detected in New Zealand before.

Environment Southland Senior Scientist Dr Jane Kitson says that anecdotal information suggests that the bacteria could have been present in our waters for some time. "We know very little about what kanakana do while they are out at sea," Jane says. "The concern now is confirming what strain of bacteria it is and for that we need more samples. Although kanakana have been seen in



These kanakana clearly show the red contusions on their bodies. If you catch any fish which have these kinds of bruises or sores, please put them on ice and bring them to Environment Southland.

the Matura River in December, we're not likely to get another run this year so we're probably going to have to wait until next year for MAF to be able to confirm what strain is affecting them."

Kanakana are a particularly important mahinga kai (source of food) for Ngāi Tahu.

Dean Whaanga, Te Ao Mārama Inc's Resource Management Officer, says kanakana are considered a real delicacy in Southland. "Maori have been going to the many harvesting sites for centuries to gather, dry and take them home to store then eat. On the different waterfalls where they are harvested, families had their favourite spots – these spots had their own names. People even came from Canterbury to catch kanakana."

Until quite recently, when kanakana were caught, they were distributed around local families. Dean says this was a real treat for those who received them. "Maybe it's because we are seeing a decline in kanakana numbers that this practice is not as common as it used to be."

The rich and oily taste of this taonga (treasure) puts a smile on the faces of the people that love to eat them. "We need to ensure the future of the kanakana for us and our future."

Kanakana are often mistaken for eels – their wide, sucking mouth marks them out as a different species but few people get close enough to see that distinguishing feature. They are parasites, sustaining themselves at sea by latching on to whales and large fish and sucking their blood and juices.

If you notice kanakana or other fish with red and/or swollen fins or marks that look like bruises or blood clots then call the MAF hotline on 0800 80 99 66. If you catch fish with these markings, please put them on ice (don't freeze them) and bring them into Environment Southland, cnr North Road and Price Street, Invercargill.

Salmon, trout, eel and whitebait could also have these signs of illness.

Possums star on camera



Pesky possums can't hide from the latest innovation employed by the Environment Southland Biosecurity staff to track their behaviour.

The team have been using an infrared video camera during the last few months, taking it to different properties in possum control areas (PCA's) in Southland, strapping it to a tree or post and then watching what the animals get up to when they think no-one's watching.

What Senior Biosecurity Officer Dave Burgess and his team have seen has been something of an eye-opener as they've watched how possums approach bait stations and traps and how they behave towards each other. They've even seen the odd cameo appearance by species they weren't expecting to see.

The camera is equipped with sensors so it activates when it detects movement and films the pests' nocturnal activities.

Dave says the camera hasn't been used on many properties so far but the surveillance footage has captured some valuable information.

As well as helping property owners confirm that there is in fact a possum problem on their land, the camera also acts as a monitoring tool which can be used to help with the Council's ongoing PCA operations.

Dave says the full potential of the infrared camera hasn't been realised yet and in the future it may help determine the make-up of an operation by tailor-making required control plans for different areas or properties.

"It could help us trial different lures or baits to find out what is the most suitable at a specific location. Possums can be quite particular, especially about food at various times of the year."

The footage has also shown interesting exchanges between possums including

fighting, stealing food from each other, and one investigating a dead companion, Dave said.

The star of the show hasn't always been the expected species with a deer making a cameo appearance at a protected bush reserve where the owner did not know

there was any, and there shouldn't have been any, Dave said.

Some of the interactions on display have been amusing but not enough to change Dave's views about possums – he still says that they're nothing but trouble and need to be controlled.



Mother possum supervises her joey feeding from a bait station.



An uninvited guest - this deer made a surprise appearance in the infrared photo show.



Discharge of Farm Dairy Effluent

Changes to the rules governing the discharge of dairy shed effluent have been adopted by Environment Southland after a long period of consultation with dairy farming leaders and the dairy industry.

The long-running collaboration has resulted in effective provisions for managing farm dairy effluent that farmers, the dairy industry and Environment Southland all agree with.

Warren Tuckey, the Council's Director of Resource Management, said that all parties had worked together to reach agreement on what constituted good environmental practice in the discharge of farm dairy effluent, and then considered a range of methods to encourage or ensure their adoption by farmers.

A new policy and rule framework has been developed to underpin good practice and to minimise the possible loss of nutrients, in particular phosphorous, and faecal coliforms, to groundwater and surface water.

The new rules have been advertised and will come into force early in the new year once the appeal period closes – that's assuming there are no appeals.

Mr Tuckey said those who have a consent expiring in the near future, or were planning to convert a property to dairying, should be aware that:

- Environment Southland and industry have developed a table with management requirements for different soil and slope categories across Southland.

- There are new requirements for effluent storage during times when soil moisture levels are too wet to absorb effluent without run-off.
- New applications (or increases in scale) for discharge of dairy effluent will be a discretionary activity.
- Consent requirements for renewals of existing activities (where you already hold a consent) will depend on the soil/slope category and whether you irrigate with low or high rate systems.

If you want to know more about the new rules, please get in touch with our Consents staff.



New rules for storing silage

New rules for storing silage are designed to minimise the impact that this common stock feed can have on the environment, particularly if liquid leaches from silage stacks or pits and reaches water.

The new provisions came into effect last month with a transition period to allow farms with existing bunkers to become compliant. Silage pits that don't comply with these minimum requirements will need a resource consent:

Land used to store silage must:

- Be at least 50 metres from any surface waterbody, wetlands or bore (or 20 metres from a surface waterbody if on a concrete pad with leachate contained),
- have no offensive odour, and be at least 100 metres from a dwelling on a neighbouring property,
- not release leachate to water (and any leachate discharged to land should be in a controlled way)

- not have stormwater runoff coming into it

Some people will be able to make their silage pits compliant by carrying out some work on the existing set-up, while others will need to apply for a resource consent. The Council has made provision for these changes to occur over time. You'll find more details on our website: www.es.govt.nz.

Pukerau demonstration site shows how to plant well



Environment Southland's Land Sustainability team have established a new demonstration site for native riparian planting on the banks of the Pukerau Stream, just below the bridge on State Highway 1, 8km north of Gore.

Land Sustainability Officer George Ledgard says the site was established in 2009 and can easily be seen. It's a showcase for best practice riparian management.

Allan Smith kindly allowed the project to go ahead on his 400ha property bordering on the Pukerau Stream. The site regularly floods and bank erosion is common along sections of the stream.

"Riparian planting not only stabilises banks that are vulnerable to erosion but it also provides stock shelter and in-stream and riparian habitat for native biodiversity," George says. "And most importantly, riparian buffers provide a filter strip to catch sediment and

nutrients transported in overland flow, which is currently a big concern for our waterways."

One of the aims of the demonstration was to document the costs of riparian planting to establish accurate costs of fencing, planting and maintaining riparian waterways. You can get these

costs from our Land Sustainability Team and also come to the field day that's being planned for the site.

In the meantime, you'll get good advice about planning and planting riparian areas from our Land Sustainability staff – just call them on 0800 76 88 45 or e-mail service@es.govt.nz.



Planting at Pukerau – riparian planting will reduce the erosion that's visible on the opposite bank.

Regional Policy Statement Update



In much the same way as you'd eat an elephant – one bite at a time – our planning staff are working away to finalise the draft of the new Regional Policy Statement.

This project has been underway for three years, starting with a series of discussion papers that generated a lot of comment from the public and

interested parties. Their feedback has been incorporated into a draft version, which is now being considered by Southland's three other Councils, tangata whenua and key stakeholders.

It's likely that the Council will publically notify the Regional Policy Statement in the first half of 2012.

This will provide the wider community with an opportunity to provide feedback on the Regional Policy Statement, so we can develop a document that reflects the values of Southlanders and is relevant to all the community.



Invercargill to Bluff trail a work in progress

Planning is underway for the second stage of the Invercargill to Bluff cycleway, but extra funding is required before works can proceed.

Environment Southland Transport Policy Analyst Russell Hawkes says stage two of the four-stage development to connect Invercargill to Bluff, entails a 5.6km stretch of track from Station Rd to Kekenoo Place at Awarua.

Preparations are well advanced. These include getting consent from adjoining landowners and putting together formal consent applications.

But there's more to be done, including securing the funds needed to complete the second stage of the joint Invercargill City Council and Environment Southland project.

Some of the money needed for the \$619,000 stage has been at least provisionally acquired, including \$300,000 from the Te Araroa Trust, and

\$50,000 contributions from Environment Southland and the Invercargill City Council.

The project is also applying for an extra \$219,200 from the Community Trust of Southland, but that application won't be considered until next March.

Russell Hawkes says that if all of the funding comes through, the section

of gravel track to be built on existing Environment Southland tide banks and including two new bridges, should be complete by October 2012.

Stage one of the trail to Awarua, a 3.2km length of track from Lake St to Station Rd, has already been finished. The last two stages stretch about another 23km to reach Bluff.



Cyclists are already enjoying the new stretches of track south from the Invercargill estuary, which will eventually take them all the way to Bluff.



Envirosouth now comes to you direct

You may have noticed that we've changed the way we deliver our quarterly Envirosouth newsletter.

For several years we've arranged to have this newsletter delivered to households as an insert in two community newspapers, *The Southland Express* and *The Ensign*.

This year our annual survey of residents showed a drop in readership associated with changes in newspaper reading habits, so we have decided to go back to the system we used originally, and have the newsletter delivered direct to every letterbox across the region.

If you don't remember having seen our newsletter before, you can find

all the back numbers on our website, www.es.govt.nz as well as all our other publications.

The next issue of *Envirosouth* will be published next March and will include important information about our Council's 10 year plan, and your opportunity to influence significant programmes and budget decisions.

Envirosouth

Envirosouth is published four times a year by Environment Southland. It is delivered to every household in the region. We welcome your comments on anything published in this newsletter, as well as your suggestions for topics you would like to read about in future issues.

The next Envirosouth will be published in March 2012.

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