

# Envirosouth

Environment Southland News

September 2011



Issue  
24

LTCCP Amendment  
Waituna Lagoon Update

Our Ecosystems and Our Threats launched  
Business continuity planning





# From the Chair

**It was a pleasure to chair the Mid Dome Wilding Trees Charitable Trust's 4th annual meeting in Lumsden last month. Despite an actual spend that is 50% less than budgeted, the programme to eradicate wilding pines from the Mid Dome area continues to make significant gains.**

Year four of the trust's 12 year plan involved clearance on 2450ha of land. This work involved ground contractors, aerial spraying and volunteer groups. You can read about the initiative shown by SIT student volunteers elsewhere in this newsletter. The trust also holds volunteer days twice a year to give the public an opportunity to make a positive contribution to an ecological restoration project.

In total volunteers cleared seedlings from approximately 81ha of land.

A highlight of last year's programme was the initiation of extensive spray trials on the front / western faces of Mid Dome. These large areas of mature trees are visible from SH6 between Athol and Lumsden. It's integral to the trust's programme to kill these trees to prevent the dispersal of seedlings from this windy "take off" site.

37ha on the Parawa ridge was sprayed in mid January to trial two different chemical brews. When we have conclusive results from these trials we can push ahead with spraying the remainder of the mature seed source trees.

The Mid Dome site and situation create some big challenges for the trust. We successfully advocated to Government to gain an exemption for tree weeds from the Emissions Trading Scheme. This enabled the spraying of the western faces to go ahead,

The cold climate, extreme and variable wind conditions and high altitude means that Mid Dome is a difficult site to operate an effective spray programme.

The trust has applied to the Community Environment Fund for \$300,000 and if we succeed the Trust will co-fund the proposed additional work for the same amount. This will allow us to eradicate a much larger area of trees and importantly, before they cone and prevent further spread, or grow larger and become more difficult to remove.

"A stitch in time saves nine".

But we also continue to use our high national profile to advocate to the



**Chairman Ali Timms.**

Government to fully fund our eradication programme, the majority of which takes place on crown controlled land.

Unlike many other areas of New Zealand with wilding problems, the goal of eradication at Mid Dome is achievable. This will result in the restoration of this valuable high country tussock and pastoral land.

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



# What does climate change mean for Southland's rural economy?

**Climate change and its impacts on Southland's environment and rural industries will be discussed by two of New Zealand's leading commentators at a public seminar in Invercargill next month.**

Climate change scientist Dr Jim Salinger and financial journalist Rod Oram are travelling around New Zealand giving a series of presentations.

Dr Salinger will speak on the latest information on climate change science and its impacts on farming and communities in the New Zealand and Southland context.

Rod Oram will talk on emissions trading and compare New Zealand's climate change targets with our trading partners' targets, and what this means for agricultural trade.

Dr Salinger is an internationally renowned climate change scientist, now at the University of Auckland and the University of Tasmania, who formerly worked at NIWA. He was a lead author for the Intergovernmental Panel on Climate Change which was awarded a Nobel Peace Prize in 2007.

**Rod Oram** is an award winning financial and business journalist and Radio New

Zealand National/Sunday Star Times commentator. He has commented widely on the Emissions Trading Scheme, climate change and the various pressures being placed on trade for now and during the 21st century.

Their seminar in Invercargill is being hosted by Environment Southland and will be held at the Invercargill Workingmen's Club on Thursday 27 October from 1.30pm.

**Cover picture:**  
Zane Moss - electric fishing.

# Waituna Lagoon



**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.**

In the previous *Envirosouth*, we detailed the plight of the lagoon and some of the work that had begun in response to the high risk of it 'flipping'. Here we highlight three projects that are critical to this response.

Copies of all technical reports, newsletters and updates are available on our website [www.es.govt.nz](http://www.es.govt.nz).

## Catchment science continues

Scientific monitoring and analysis provides the basis for everything we are aiming to do and achieve in the Waituna catchment. In July, 26 science experts joined Environment Southland staff in a 'think tank'. This meeting was the first step in getting a Science Plan underway, by prioritising the short, medium and long-term scientific needs of the catchment.

Senior Scientist Dr Jane Kitson said it was a great opportunity to get some of New Zealand's leading scientists and agency representatives together and pick their brains on the issues facing Waituna. "These scientists know what we are facing here and wanted to be involved," Jane says.

One study proposed at the meeting is about to get underway. Surface Water Quality scientist Kirsten Meijer says the Longitudinal Water Quality Study will provide a more detailed and comprehensive view to give us a better understanding of water quality throughout the catchment and to identify sources of nutrients and sediment. Eleven new monitoring sites have been added to the five sites we have in the catchment.

Water quality information from these 16 sites will be gathered monthly for a year, and more intensively during floods. "Several sites will be able to identify sediment sources, meaning we will be able to tell which activities are



causing the most sediment to enter the waterways, from things like erosion or overland run-off."

The information collected will also help to calculate loads going into the lagoon, and will help with the water quality modelling being done in the catchment.

The study, which will be underway in October, is an important step in building up our knowledge of the catchment, Jane says. "The community said we needed more sites, we needed to know more, and it is great that this study has been able to be started so quickly."

## Short opening reduces risk of flipping

As part of the recommendations to reduce the risk of Waituna Lagoon flipping, an opening and closing regime was investigated. Since 1908, the lagoon has been artificially opened to the sea periodically to better drain the surrounding land. On 15 July 2011, the lagoon was opened at a historic location to try and minimise the direct harm to the *Ruppia* (seagrass), while also allowing the low-lying farm land around the lagoon to drain.

Coastal scientist Greg Larkin says from an ecological perspective the lagoon opening was successful. "The lagoon closed quite quickly, on 19 August, and over that time the water temperatures were low and the *Bachelotia* (slime algae) was killed off," Greg says.

Prior to opening in April, the slime algae had 80-100% cover in some places. "It was smothering the *Ruppia* beds. Now it's down to around 5% cover."

After diving and checking a small area, Greg found that *Ruppia* was starting to recover. "Ecologically, we would like the lagoon to remain closed over summer

to keep the salt level down, and the water level high. That would be ideal during the key *Ruppia* growing period from October to March. It would help to stabilise the lagoon and the sediments."

However, farmers in the catchment may not agree with this, as water levels may start to impact on their farm drainage. Nutrient levels may also reach critical levels, forcing the need for the lagoon to be opened to manage the risk of flipping.

## Farm Visits

Farmers in the catchment have been collaborating with industry and the Council as part of an intensive farm visit programme.

Dairy farmers and dairy graziers have hosted a team of representatives from Environment Southland, DairyNZ and Fonterra onto their farms in recent weeks, aiming to identify areas where environmental outcomes could be improved on-farm. The programme will be extended to other farming types in collaboration with Beef & Lamb NZ.

Topics discussed during the visits included wintering, crop selection, soils and drainage, fertiliser use, farm dairy effluent consent and septic tanks. Following these discussions and a farm walk, an action plan has been developed for each property, in consultation with the farmer, on how improvements could be made and identified any on-going support needed for implementation.

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](http://www.es.govt.nz).



# How healthy are Southland's ecosystems

**W**aituna Lagoon has been a constant topic in the media and the community for the last few months, but what about the rest of Southland's waterways? Environment Southland and Te Ao Mārama Incorporated have been compiling **Our Ecosystems, one of four reports which together make up Southland Water 2010: Report on the State of Southland's Freshwater Environment.**

Dr Jane Kitson, project manager for the State of the Environment project, says the report looks at the health of our freshwater ecosystems (rivers and streams, lakes and lagoons, wetlands, and estuaries) and what we know about the life within them. "The big question we wanted to answer with this report is: 'How healthy are they?'" Jane says.

"We also took a step further and looked at what we are doing about the health of our ecosystems, how we as a community affect them and what can be done to improve them."

Monitoring from our state of the environment programme and from Te Ao Mārama Incorporated has been used to compile the results and these are measured against national guidelines and outcomes set in the Regional Water Plan for Southland.

"The Water Plan target is to improve water quality by 10% in the next 10 years for certain water bodies and water quality variables," Jane says. "So, as it only became operative last year, it's a good opportunity for us to see how we will meet that target as this will influence the response needed to get there."

The areas of most concern in the rivers and streams are nitrate and phosphorus levels. "What is alarming is that 48% of our monitoring sites are showing increasing levels of nitrates. Also, 12% of our sites have chronically toxic nitrate levels most of the time. Our phosphorus

sites have low compliance with the standards although we are seeing some improvements over time." While not exceeding the guideline, ammonia is also showing an increase, which is another indicator of increasing nitrogen.

Faecal bacteria levels and visual clarity are remaining steady and there is no apparent change in macroinvertebrate numbers, which are a key indicator of ecosystem health, or periphyton levels.

Southland's fish population remains good compared to the rest of New Zealand. However we are seeing decreasing trends in pastoral and tussock land classes.

"We monitor Lakes Te Anau and Manapouri regularly and both are

in very good condition," Jane says. "Unfortunately this is not the case with the Waituna Lagoon – its poor state has been very well publicised during the year and we are now mounting a major response in that catchment."

Wetlands, once seen as a wasteland, are becoming more valued for the important ecosystem and habitat that they provide. We don't currently monitor wetland condition, but we do know that some 90% of the wetlands that existed across Southland in 1840 have been drained.

Southland's estuaries also play an important function in ecosystem health, being the connection between fresh and coastal waters. Our scientists have found that the estuaries at the bottom



**A Limehills School student learns about the life in our streams with Environment Southland Scientist Kirsten Meijer.**



of developed catchments are generally in poor condition, Jane says. "We have the most data for New River Estuary, and the key issues there are the levels of sediment and nutrients coming in which increase the growth of macroalgae, and reduce oxygen levels in the sediments."

A combination of extended monitoring programmes, source investigations, plan reviews, policy change projects and partnerships are getting underway as a consequence of the results presented in this report.

Chief Executive Ciaran Keogh says a lot of work has already been done in response to the results found in the Waituna Lagoon. "The challenge for the Council now is to expand some of our existing programmes to other areas, fill our knowledge gaps and work hard in order to meet the 10% improvement target from the Water Plan."



If you would like a printed copy of any of the State of the Environment Reports (Our Health, Our Ecosystems or Our Threats) please call us on 0800 76 88 45, or email [service@es.govt.nz](mailto:service@es.govt.nz) with your postal address. Copies are also available for download on our website, [www.es.govt.nz](http://www.es.govt.nz).

## Regional policy statement review



**T**ucked away in a corner of Environment Southland's offices, a small team of planners are beavering away to bring the region's most important planning document up to date.

The Regional Policy Statement became operative in 1997 and a lot's changed in Southland since then, so a new policy statement is needed to guide planning decisions in the next 10-15 years.

For example, the demands on the region's water resources have grown enormously in that time, while air quality has become a significant

issue in Invercargill and Gore and the community's expectations of solid waste management, including recycling, are very different now to how they were in the 1990s.

Back in 2009 our planners worked with a team from the Southland District Council to produce a series of issues and options papers on major topics that needed to be considered during the review of both the Regional Policy Statement and the Southland District Plan. Many people made comments, and their views have helped to shape the Council's thinking on what should be included in the new policy statement

that will guide planning decisions in Southland for at least the next 10 years. If you're interested to know what people told us, please look at our website, [www.es.govt.nz](http://www.es.govt.nz) and type RPS Review into the search box – you'll find all the community feedback plus the information about how the review is being undertaken.

Now a draft of the Regional Policy Statement is being prepared and will be considered by our Councillors before the end of June 2012. After that, it will be released for public submissions.



# Biosecurity at the farm gate

**T**hey say prevention is better than cure and that message rings true when it comes to biosecurity at the farm gate.

Biosecurity Officer Steven Henry says time and money can be saved if people prevent pests, be they plant or insect, from getting on to their farm.

Landowners need to start thinking about blocking the pathways that pests, including clover root weevil and nodding thistle can spread.

For farmers, establishment of pests could mean lost production, or extra expenditure on labour and chemicals to rein in their spread, Steven says.

While it is not possible to manage some pathways, there are ways people can lessen the chances of pests arriving or spreading on their land.

Contractors were one known source of pests because they often went from farm to farm, inadvertently carrying weed seeds on their equipment.

To stop the threat, farmers could ask contractors to clean their machinery before coming to their property.

Alternatively farmers could set up their own quarantine zone and clean the machinery themselves, restricting possible pest introduction to an area that could be easily controlled.

Farmers visiting other properties where there were known pests should also wash any equipment used, even their gumboots.

Gravel is another source of common pests like ragwort, broom, gorse and thistles, Steven says.

"Using gravel from a well-managed on-farm pit is usually the best way to avoid pest issues."



**Weed seeds can enter farms a variety of ways, and can mean lost production or extra expense.**

Unwashed and unscreened gravel can be rife with problems.

Steven says new stock can also bring weed seeds trapped in their pelts and hooves onto the farm.

The same applied for stock feed with seed sometimes being caught in hay, he says.

To thwart those pathways, farmers could either buy from a reputable source or someone they know, whose paddock or stock they can investigate for any pests.

It's not only the introduction of pests that people need to be aware of, they can also restrict the spread if they already exist, Steven says.

"If you were taking hay off a paddock where nodding thistle was also present, you could feed the hay back on to the same paddock rather than spread it around your farm."

Simple measures that stopped the spread of pests already found in the south could also help prevent the

arrival of others aren't in Southland, like Nasella tussock and Chilean needle grass.

Although some pest plant would probably never make it to Southland because of environmental constraints, for others it's just a matter of time, Steven says.

"And some of those could have a major economic impact."

One pest that arrived in the south last year, the Clover Root Weevil, illustrates the potential problem pests can create. It can reduce spring clover dry matter by more than 50%.

Steven knows some people probably won't go to all these lengths but they should be aware of the high-risk elements and know how to minimise the threat.

"Just take a look around your property and how you run your farm and see if you're doing enough to keep these things out."

# Check your potato crop this year

**I**t can ruin your Ruas and annihilate your Agria, so we need your help to keep an eye out for *Synchytrium endobioticum*, also known by the much more colourful name - potato wart.

Not only is it downright ugly, potato wart can render swathes of your spuds unpalatable, giving them a pre-mashed consistency before they make it to the pot. Not that the fungus makes them inedible but who wants to serve up potatoes with warts? Most people would say no.

First discovered in Invercargill in the 70's, the soil-borne fungus is only easy to spot when pulpy warts cover your potatoes, resembling cauliflower exploding from the inside. There have been only a handful of potato wart cases in the past decade, the most recent earlier this year in Invercargill.

Each outbreak has been eradicated but Senior Biosecurity Officer Randall Milne says every now and then the fungus crops up again and it's important to know what to look for and what to do about it.

Randall says when the council is notified of a fresh outbreak in a home garden no time is wasted to quickly stop it spreading - which can be done all too easily. Potato wart can survive for a long time in your soil, so if you discover it in your patch, it's important you seek help as quickly as possible. MAF is called in to fumigate the soil and kill off any nasty remnants of the fungus.

Randall says if potato wart spiralled out of control not only could the home gardener face a potato famine, commercial growers could be in trouble too. Fortunately potato wart has never been found in commercial properties, and we want to keep it that way.

For the unwitting, transmitting the disease can be done simply by sharing



**Potato wart is an unsightly fungus that could ruin your potato crop.**

potatoes or planting seed potatoes from the garden. You can also spread it when you share plants and tools by forgetting to wash soil off a spade, machinery, footwear, roots and tubers.

Not only can the spread be stopped by cleaning your gardening gear, there are also simple tactics to avoid it ever arriving on your patch – especially now when you're planning a new crop. The best chance to stay free of potato wart

is to use certified seed potatoes and refrain from sharing or planting saved seed potatoes.

All gardeners need to be aware of the disease and know what to do if they pull up a potato to find an unsightly surprise. The disease will appear on all parts of the potato that are underground, except the roots. In the earlier stages of the disease, tubers will have white pulp warts that grow darker over time.

## What can you do to stop the spread?

- Plant certified seed potatoes, which will be free of potato wart.
- Before using machinery, footwear or garden tools on someone else's property give them a wash.
- Don't plant or share saved seed potatoes
- If you're sharing or swapping other plants, clean off any soil before you hand them over or better still, swap clean cuttings.
- If you suspect your spuds have potato wart get in touch with Environment Southland straight away by calling (03) 2115115 or on 0800 76 88 45.



# Summer students add to our knowledge of Southland

**E**ach summer Environment Southland employs several students to carry out special projects around the region. Last summer eight students joined the Compliance, Water Resources Science and Biosecurity teams, gaining valuable work experience and helping regular staff with their fieldwork.

Amy Clarke, Gabby Parker, Dana Mulvany and Jordan Sandford joined the Biosecurity staff during their summer break from university. Amy described her experience as really interesting, particularly in seeing what sort of thing she could be doing once she's finished her studies.

Both Gabby and Amy were employed to carry out the annual weed survey, with Amy focussing mainly on roadside weeds, checking on differences in weeds 3km inside and outside the Southland border. "The roadside weeds survey is a long-term project," Amy said. "It's mainly done to extend the database of weeds, to improve the knowledge of what is found around Southland."

Dana and Gabby's roles were not solely focussed on roadside weeds, also looking at river, forest and developed sites. The overall aim of the project is to get a picture of the weeds found across the region with around 100 sites surveyed every year. "They are into the third year of the project already," Gabby said. "After five years they will go back to the same sites and see if the weeds are still there."

Gabby has recently completed her studies in Natural Resources Engineering and part of her course requirement was to complete a summer of work experience. She said the job had been amazing; getting to do things with plants and seeing all around Southland but the highlight had been going to Stewart Island. "We got to go to Stewart Island to kill Gunnera, which is a pest plant found on the island," Gabby said. "I also got to helicopter down a river looking for nodding thistle. It was awesome."



**Amy Clarke, Tim Elder, Andrew Little, Michael Brown, Jordan Sandford and Gabby Parker discuss their summer work experiences.**

A highlight for Amy was finding a weed that had only ever been found in Southland once – the Chilean Glory Vine. "I don't think that's a good thing, but it was a highlight for me."

For students Tim Elder and Andrew Little, their holiday jobs with the Council's water scientists brought them back to familiar territory as both had worked at Environment Southland in previous summers.

An avid hunter and all-round outdoorsman, Tim said you couldn't find a better job to have over summer. "We got to go to some pretty random spots that you wouldn't get to with any other job."

Tim is in his final year of a surveying degree at Otago University. He said while the position at Environment Southland wasn't a conventional surveying role, he still had to take field measurements.

He and Andrew Little were responsible for downloading data from water level recorders and gauging little streams all over Southland.

"A lot of catchments are ungauged, so the information we are collecting will bolster the information and help the team with setting flow yields," Tim said.

Jordan Sandford started her second year of study towards a Diploma in Environmental Management this year. Over the summer she was involved in two new projects and continued the ant monitoring project that has been going for several years.

One of the new projects she was particularly excited about was the weta and reptile monitoring programme, where she had to set up monitoring stations at four different southland locations.

"We had to make and set up five little boxes covering a huge area in each location," Jordan said. "As a general rule, science reports say you should wait 6-12 months and then go back and see if they are colonised." However Jordan was back in the area within the month and checked the box to find a tiny weta. "It's a really significant find," she said beaming. "It was such a huge area and such a little box, and we got a weta so soon. It was epic."

*If you're interested in a holiday job with Environment Southland this summer, check our website [www.es.govt.nz](http://www.es.govt.nz) – all casual positions for students are advertised in mid to late September.*



# Enviroschools students come together



**From worm farming and pruning fruit trees to calculating food miles, the 250-plus students who attended last month's 10th Enviroschools Hui were challenged to learn new skills and apply them in their own schools and homes.**

The annual hui brought together students from 14 of the region's 20 Enviroschools to share and learn. This year was the largest gathering yet,

hosted by Limehills School, which is the second Southland school to earn coveted Green-Gold status in the Enviroschools programme.

Environment Southland coordinates the programme regionally with funding support from the Invercargill City, Southland and Gore District Councils. Environmental Education Coordinator Nikki Tarbutt said that this year's hui drew on community expertise to

provide hands-on workshops where the students could learn practical skills.

Topics included how to protect newly planted trees against wind and foraging rabbits; making a worm farm from scratch; pruning fruit trees; caring for hens, making great compost and how to calculate the food miles needed to transport common food items from their point of origin to Southland shops.



*Brook Churstain from Limehills School puts food scraps into her mini worm farm.*



*Environment Southland Councillor Robert Guyton teaches students how to prune fruit trees.*



*Bryce Horrell gives students from Mararoa School the chance to get acquainted with his Orpington rooster during a workshop on caring for poultry.*



*Environment Southland Land Sustainability Officer Nathan Cruickshank shows Ivan Mangubat from Limehills School how to make a tree protector.*



# Summary of the proposed amendmen

**Environment Southland is seeking endorsement from the community and our ratepayers for the urgent response being undertaken to prevent the Waituna Lagoon from “flipping”. Officially, this is a proposed amendment to the Long-term Council Community Plan 2009-2019 and we are undertaking statutory consultation with the Southland community and our ratepayers.**

This is a summary of the statement of proposal, which you will find in full on our website [www.es.govt.nz](http://www.es.govt.nz) or we can post to you in hard copy form.

## Background

When the Long-term Council Community Plan was compiled in 2008/09, we didn't anticipate the urgent response needed for the Waituna Lagoon. Monitoring shows that since 1995 the water quality in the Waituna Lagoon and its tributaries has increasingly deteriorated, to a point where the lagoon is at imminent risk of flipping.

Doing nothing is not an option.

The Waituna Lagoon is a unique ecosystem, highly valued in Southland, and recognised internationally. We need to respond dynamically, not knowing the full scientific picture, yet needing to make adaptive decisions along the way for the sake of restoring the lagoon.

Increasing contributions of nitrogen, phosphorus and sediment are the main causes of the lagoon's deteriorating state. The cumulative effects of land development and drainage over many years, and recent land use changes and intensification are known to be significant contributors to the

increasing rate of eutrophication and sedimentation.

The Waituna Lagoon is unique, and is one of the few remaining examples of a natural coastal lagoon in New Zealand. The lagoon adjoins the Waituna and Awarua Wetlands and is one of only six internationally significant wetlands in the country. The lagoon sits at the bottom of a small, intensively farmed catchment. It is a well known area for fishing and hunting and highly significant to Ngai Tahu and Southlanders alike.

The rate of deterioration has increased markedly since 2007 and the lagoon has now been assessed as eutrophic and at imminent risk of “flipping”. “Flipping” would see the lagoon change from having clear water and an aquatic environment dominated by seagrass (*Ruppia*) to turbid water dominated by algal slime, a state which may be irreversible.

During the State of the Environment Reporting process, staff asked the

question “How close is the Waituna Lagoon to flipping?” Water quality data and *Ruppia* data (from DOC) were analysed, and the answer was – very, very close. This is why Environment Southland is leading a multi-agency response to prevent the lagoon from flipping and restore it to a healthy state. If we do not take action now, we risk losing this unique ecosystem, and its ability to support plants and animals that live within the lagoon.

The estimated cost of the response is \$2,681,636, of which we had provided \$686,636, leaving another \$1,995,000 required.

Over the next financial year we intend to:

- develop and implement a science plan to undertake investigations/ research in the Waituna Lagoon and its catchment to enable better understanding of this complex ecosystem and to inform and report on the effectiveness of catchment and lagoon management options and interventions;



**The lagoon was opened at Charlie's Bay in July this year.**

# nt to the LTCCP 2009-19



- investigate, and where possible and necessary, undertake physical works to reduce the risk of Waituna Lagoon “flipping” from its current state to an algal-dominated state;
- develop and implement a monitoring programme for the Waituna Lagoon and its catchment to report on the state and trend in the lagoon; and
- develop and implement a regulatory policy framework that addresses intensification of land use in the Waituna catchment to mitigate detrimental environmental effects on the catchment, in particular, nutrient and sediment loads to Waituna Lagoon.

The \$1,995,000 proposed additional spending won't be the full cost of the Waituna response as some of our work is already provided for in our “business as usual” programmes and activities. Also, some of our ongoing planning work is region-wide but will relate to or focus on the Waituna catchment. The estimated cost of this already budgeted effort, is \$686,636.



*Waituna Lagoon*



The total cost of our efforts to prevent Waituna Lagoon from flipping is estimated at \$2,681,636 in the 2011-12 financial year. This work was unforeseen when the Long-term Plan was originally set, but \$686,636 is to come from existing programmes through redirection. The remaining \$1,995,000 is additional. Environment Southland intends to apply to the Government's Fresh Start for Fresh Water Clean-up Fund for one-third (\$665,000) of the

additional costs, and will seek assistance from industry partners for one-third (\$665,000) of the additional costs.

We intend to fund the remaining one-third from our own funds sourced from a past special dividend from our shareholding in South Port New Zealand Limited, which is held in our reserves. That will mean there is no direct effect on rating levels for our ratepayers in the 2011/12 financial year.

There is an unusual degree of uncertainty in preparing this proposal because of the rapid deterioration of the lagoon and the consequent urgency to understand the complex issue and respond. All of the costs are estimates which have been prepared with the best understanding at the time. It is possible or even likely that the costs and revenues will change before the special consultation process is complete or before the end of the financial year.

The proposed spending is allocated to the following areas:

Areas	Total Anticipated Expenditure	Already Budgeted	Additional Spending Proposed
Lagoon Science/Management	798,162	114,010	684,152
Catchment Science/Management	1,189,358	297,408	891,950
Works	362,398	-	362,398
Policy Framework	154,183	154,183	-
Community Relations and Project Management	177,535	121,035	56,500
<b>Total</b>	<b>\$2,681,636</b>	<b>\$686,636</b>	<b>\$1,995,000</b>

When allocated to our usual disclosing expenditure in the LTCCP, the \$1,995,000 additional spending proposed is as follows:

## Water

### Works and Services

- An additional \$360,000 is required to enable any physical works, which are possible and necessary to reduce the risk of the Waituna Lagoon flipping.

### Extension and Education

- An additional \$35,000 is required to enable community involvement in the Waituna Lagoon catchment

### Monitoring

- An additional \$280,000 is required to monitor catchment inputs of nutrients and sediments to the Waituna Lagoon.

### Investigations/Research

- An additional \$1,320,000 is required to develop and implement investigations in the Waituna Lagoon and catchment.

Further details about what each of these activities entails and the funding mix used to pay for them is in the full proposal, but as indicated above, Environment Southland intends to apply to the Government's Fresh Start for Fresh Water Clean-up Fund for one-third (\$665,000) of the additional \$1.995 million costs, and is seeking the other \$665,000 from industry partners, including DairyNZ and Fonterra. The balance of \$665,000 is proposed to be met from a past special dividend from our shareholding in South Port New Zealand Limited, which is held in our reserves. As a result there would be no direct effect on rating levels for our ratepayers in the 2011/12 financial year

Environment Southland invites the community, ratepayers, stakeholders

and any interested person to comment on this proposal, including the proposed project work and the proposed means of funding it. Our Councillors will consider all submissions received at a special meeting on 9 November. In order to be considered, your submission must be received by 4.30pm on 19 October. Please send your submissions to Environment Southland, Private Bag 90116, Invercargill 9840, e-mail to [service@es.govt.nz](mailto:service@es.govt.nz) or fax to (03) 211 5252. Please ensure your submission includes your full name and address. If you wish to present your submission to the Councillors in person, please include a daytime phone number.

# Report focuses on freshwater hazards



**W**hat makes us vulnerable to natural hazards, and what is in place to protect our communities are just two of the questions a new report by Environment Southland and Te Ao Mārama Incorporated attempts to answer.

*Our Threats* is one of four reports which together make up *Southland Water 2010: Report on the State of Southland's Freshwater Environment*. Each report (Our Health, Our Ecosystems and Our Uses) looks at different aspects of the freshwater environment that we, as a region, value.

Hazard planner Dallas Bradley says this report is a first for the region. "It is the first time information on freshwater hazards has been put together in this way for the Southland public," Dallas says. "It looks at what can potentially harm us and the things we value, while also considering climate change and climate variability in terms of the frequency and intensity of natural hazards."

At different times of the year Southland is threatened by natural hazards involving both too much water, ie floods, heavy snow, rainfall and hail, and by natural hazards resulting from too little water, ie drought.

The random and sporadic nature of hazards means that there is a huge amount of uncertainty in terms of predicting how frequent and how extreme they may be. "We do know that much of developed Southland is at risk from flooding and thunderstorms, particularly the Matura and Waimea Valleys and Lumsden," Dallas says. "Some might be surprised to know that we are more at risk from flooding in summer than in winter, and hail damage is more common in late spring and summer than in winter."



Northern Southland and the Te Anau Basin are more prone to drought in summer and autumn. In terms of economic impact on Southland, drought is regarded as the hardest hitting.

For Maori, natural hazards are seen as natural processes. In their world view, everything is connected and if we mismanage our environment, then events such as severe floods or droughts can result as a natural consequence of our actions. Co-author Te Ao Mārama Incorporated manager Michael Skerrett says climate change is of particular concern to Ngai Tahu. "The effects of climate change could be devastating to families for hundreds of years to come. The ability to harvest is a big part of our lives and climate change could have a big impact on that."

Climate change predictions suggest that Southland will experience an increased likelihood of natural hazards such as flooding and droughts as well as a potential for more extreme hazards.

A 2010 Southland residents' survey found that we aren't very well prepared for a natural hazard. Emergency Management Southland manager

Neil Cruickshank says that while we understand the hazards we are at risk from, only a quarter of us had an emergency kit, and a plan for when a natural hazard does strike. "The survey results showed that few people would be able to survive on their own for three days, which is a real concern for us," Neil says. "Civil defence heavily promotes that people should aim to be self-sufficient for three days because emergency services may be stretched during a natural hazard."

While Neil accepts that this level of preparedness may have increased now as a result of the Canterbury and Christchurch earthquakes, he says this report is still a good reminder to check kits, update any expired food, replace water and make a plan.

If you would like a printed copy of any of the State of the Environment Reports (Our Health, Our Ecosystems or Our Threats) please call us on 0800 76 88 45, or email [service@es.govt.nz](mailto:service@es.govt.nz) with your postal address. Copies are also available for download on our website, [www.es.govt.nz](http://www.es.govt.nz).



# Survey shows Southlanders care about water quality

**Southlanders view water quality as the most significant environmental issue facing our region, according to the annual public perceptions survey carried out by our Council.**

Virtually all of the residents who took part in the telephone survey in July said that they personally cared about water quality – either “a lot” (75%) or “a little” (21%) with only 4% saying it wasn’t important to them at all.

But when it came to identifying the activities that influence water quality, many did not appear to see that their own actions could make a difference to our rivers, streams and the coast.

Three quarters of respondents said that changes in land use were causing water quality to decline, and most people who felt that way commented that dairy farming, dairy effluent and fertiliser use were responsible, while just 4% talked about stormwater drains in towns, or industrial discharges.

88% knew that Environment Southland was working to improve the quality of water in our rivers – up from 82% last year – with a drop from 35% to 22% in the proportion who felt that the Council was doing this well.

The survey showed a slight increase in the number of people who felt that Environment Southland’s work helps

make Southland a great place to live (79%). By contrast, there was a drop in the number who said that the Council was managing water quality well or very well and the level of public confidence in the Council’s ability to effectively manage pressing environment issues has dropped.

The survey polled the views of 600 people across Southland, including Invercargill, aged 15 and up. The full results will be reported to the Council at the end of September, with the survey then being available on our website [www.es.govt.nz](http://www.es.govt.nz).



# Walk up – spring’s arrived

**It’s a sure sign that spring is here – groups of walkers strolling and striding around Invercargill’s network of stopbank walking tracks.**

Environment Southland is once again supporting Sport Southland in promoting the BNZ Invercargill Summer Walks Series, which take place every Tuesday from the end of September right through until the end of March.

There’s a different walk each week, leaving at 10am and again at 6.30pm so you can pick the time that suits you best.

These are organised events, in the sense that a member of Sport Southland’s staff accompanies each walk, takes registrations and makes sure everyone who sets out gets safely home again. And knowing that this is a regular event

is an easy way to make regular exercise a part of your day. But you can walk at your own pace, together in the group or by yourself depending on what you prefer. And best of all – it’s a chance to discover Invercargill’s best walking tracks, and it’s free!

Children are very welcome under adult supervision, but no dogs please, out of consideration for all other walkers.

So whether you’re a strider or a stroller, fish out your walking shoes and join the BNZ Invercargill Summer walks.

All the walks are publicised on our website, on More FM and Classic Hits each Tuesday morning, and you can get a brochure with the whole season’s schedule from Sport Southland, the library, Environment Southland and the BNZ.

## **Tuesday 27 September:**

Waihopai River from the North Road bridge to Queens Drive and return. Track takes in the floodbanks and Thomson’s Bush – easy, flat going. Distance: 3.7km, estimated time 45 minutes. Meet at the All Saints carpark, Hollywood Tce, 10am or 6.30pm

## **Tuesday 4 October:**

Waihopai River from the North Road bridge to Stead St and return. Easy, flat going. Distance 7km, estimated time 1 hour 25 minutes with a short option of turning back at the Otepuni Stream bridge. Meet at the All Saints carpark, Hollywood Tce, 10am or 6.30pm

# SIT students up Mid Dome



**S**outhern Institute of Technology students have earned high praise for keeping up the fight to eradicate Mid Dome of the pest plants – the notorious wilding pines.

In April, and for the second year running, 11 of the Institute's Environmental Management students and its course manager Dr Ross Ramsay volunteered a weekend of their time at Mid Dome, in Northern Southland, where they uprooted about 7000 wilding pine trees over 24 hectares on farmers Jeff and Linzi Keen's property.

Dr Ramsay said the trips to Mid Dome in support of the work done by the Mid Dome Wilding Trees Charitable Trust were a highly valuable experience for his students.

Not only did they learn about pest management at the front line and spend time with the agencies involved, it gave some the opportunity to see part of the countryside they might otherwise never encounter, he said

"And it's good for them (students) to be able to get out of a laboratory and go somewhere they can really find out about their subject."

Without exception, the students said it was the best field trip they had ever been on, he said.

The success of the trip has been enough for Mr Ramsay to investigate whether the Mid Dome Wilding Trees Charitable Trust's eradication programme could be adopted by the course at its first semester community-based project.

The involvement has also earned the appreciation of other groups involved with the purge of wilding pine which include the species *Pinus contorta* and *Pinus mugo* from the slopes of Mid Dome.



*SIT student Sarah Lloyd gets to work eradicating wilding pines on Mid Dome. Photo: Ross Ramsey.*

Mid Dome Wilding Trees Charitable Trust Chairman Ali Timms said the field trips were a fantastic initiative, particularly because they were a chance for the Environmental Management students to have a first-hand experience with an environmental issue.

The students had taken a degree of ownership of the problem and the Trust had formed a valuable relationship with SIT, she said.

The involvement of the students benefitted the Trust similarly to other volunteer days at Mid Dome in that it lifts the profile of the project and helps spread the word, Ms Timms said.

Environment Southland Biosecurity Manager Richard Bowman also

commended SIT and the students for their work, and said it was advantageous for everyone concerned.

Most of all the students gained a real sense of accomplishment through their participation in an environmental project.

It also enabled a fresh understanding, by another audience, of the task that confronts the Trust, he said.

The participation also signalled SIT's continued willingness to be involved in environmental issues within the region.

"It really is win-win all round," Richard says. That is, except for wilding pines.



# Business continuity planning vital for small businesses

## How would your business cope in the event of a disaster?

**That's the question business owners should be asking themselves in the wake of Christchurch's earthquakes, according to Emergency Management Southland Advisor Craig Sinclair.**

The February 22 Christchurch earthquake has highlighted the importance of continuity planning for businesses, especially when it can mean the difference between going under or coming out of a disaster intact, he says.

Craig, who has recently returned from his second stint with civil defence in Christchurch since the earthquake, says all business owners should make a plan and work out what they would do in an emergency such as an earthquake, a flood, extreme weather events and other hazards that may threaten their business.

The goal of any emergency planning is to promote business continuity and safety, minimise impact, and assist in speedy recovery.

What would you do if you could no longer operate from your premises? How could you still pay your staff? How would you communicate with staff, clients or customers if you didn't have a back-up copy of their contact details? Or if you have no electricity – how, for example, do you open electronic doors to evacuate your building? "Businesses need to have contingencies in place so they know what they should do if something goes wrong," Craig says.

Some disasters might be short-lived; for example, a business might be out

of action for a week with a flood. But the Christchurch scenario has shown a huge variance. Businesses may be back to normal almost immediately, or after several months; others will take more than a year as they operate from new premises, sort out if clientele are still there and whether their business niche is still viable.

Insuring for business continuity can make a big difference to help businesses get back to normal. "Those who don't have insurance and their businesses are ruined are going to find it very difficult to get back on their feet," Craig says.

Decisions may need to be made about how much a business is willing to pay for continuity insurance and how much cover they need. Some Christchurch businesses have six-months continuity insurance but now find it will take a year for them to get up and running. Other businesses pay premiums for decades and never have to cash in on it, Craig says.

Another important planning consideration is getting information from computers by regularly backing up and keeping records off site. That may mean daily, weekly or monthly back-ups stored on an external hard-drive and kept at home or some other location.

Having access to emergency supplies on site should also be part of the plan, including water and a cabinet with tools, such as a hammer and axe, to assist in an emergency escape.

Craig says the situation in Christchurch looks grim at the moment but it is improving steadily and he has seen positive changes with each visit he

makes. Things such as traffic deadlock are stressful and annoying. "It took us half an hour to go from Bealey Ave up to Northlands Mall, normally a 10 minute drive," he says. And some of the issues you wouldn't think about also added to the stress of residents, such as sports grounds being out of action because of slumping and liquefaction. "They are busy trying to clear them to get as much normality as possible back into life."

Like many, Craig found it a big shock seeing post-quake Christchurch. He came to know the city well in the past five years through regular visits to his daughter at university. "I always thought, 'what a beautiful city' and that's changed dramatically. All the old churches are damaged and walls are exposed. The old garden city of Christchurch is going to be no longer and it will be replaced by a more modern city."

For some businesses, the quake has also had positive spin-offs, as those in the suburbs are "rushed off their feet" with the CBD out of action. Also when the rebuilding phase begins down the track "it will certainly boost the Canterbury economy", says Craig.

Contact Emergency Management Southland, 03 211 115 or [info@civildefence.co.nz](mailto:info@civildefence.co.nz) for more information on business continuity planning.







## Five points for taking contingency planning action now

- Identify the most important thing needed should your business stop or need to relocate urgently. For example, that might involve computer data, power or water supply
- Put your plans into action
- Consider how to overcome other issues, eg buying a generator
- Undertake basic actions today to overcome these issues, such as buying an external hard drive to back up your data and store it off site
- Think about contingencies concerning your staff including:
  - how to make them safe if an emergency occurs at work
  - storing their contact details off-site
  - how you can continue paying your staff if your business has to cut back, relocate or close temporarily



Damaged shops Christchurch. Photo: Martin Luff.



# Sims cleans up site and practices

## **W**hat do you do if you have a scrap metal yard that has problems with run-off, dust and waste?

Well in Sims Pacific Metals' case they commit to fixing them.

Environment Southland Pollution Prevention Officer Jodi Thompson says the company deserves a pat on the back for the way it's turned around what was a troubling situation into an increasingly positive outcome.

Last year, Jodi visited the Invercargill site and found a raft of issues including stormwater and sediment run-off, dust discharges and evidence of waste being burned.

The greatest concern was that by the nature of the business there are materials kept onsite that can be damaging to the environment if they get into water, Jodi says.

Once the situation was brought to the company's attention she says its response was pleasing by agreeing to participate in a pollution prevention scheme.

Since then the company has made a concerted effort, spent a lot of money and restructured its work practices to try and rectify the problems, she says.

Improvements that have been made have been largely thanks to the willingness by Sims Pacific Metals to co-operate with Environment Southland and the Invercargill City Council.

Jodi says there was a complex mix of different problems to deal with at the site, not all of which were the company's doing.

The site first opened as a scrap yard in the 1960s and Sims Pacific Metals had

owned it for about 15 years; so not only did the company have to clean up its own act, but the mess left behind from undesirable practices of the past.

Work that has already been done, includes the installation of a huge new drainage system to contain contaminants, and the next stage is to stop the effects of historic landfilling at the site and its interaction with groundwater, she says.

The company is about halfway through the necessary work and it will be about another 18 months before it's finished, she says.

Jodi is pleased with the progress and is keen to see it continue. But most of all it's a lesson to other people and businesses.

"If they want ongoing help from us to fix these kinds of problems, they will get it."



*Sims Pacific Metals manager shows Environment Southland Councillors around the improvements made to the site.*



*A stormwater treatment system was installed on the site as part of the clean up.*

# Safety first this summer boating season



**If you're eagerly anticipating warmer temperatures to take your mates on the first fishing trip of the new season, ask yourself if you're really prepared.**

Not whether you have enough bait, lures in your tackle box, or fuel in the tank but are you prepared with safety in mind.

Environment Southland Deputy Harbourmaster Lyndon Cleaver says safety must be paramount for any boatie and there was no better time to ensure everything was up to standard than at the beginning of a new season.

Since last year new boating rules have been in place, easy to follow, and intended to increase the chances of survival, should any difficulty be struck on the sea, lakes or rivers across Southland.

Among the new rules is the requirement that all boat owners ensure that their vessel has clearly identifiable markings.

That could be the vessel's radio call-sign, a trailer registration, or other markings that would assist in identifying the vessel in a rescue situation, Lyndon says.

The markings must be displayed on each side of the vessel.

Every person onboard a vessel 6m and under in length MUST wear an approved, properly secured lifejacket, it comes down to being the skipper's responsibility.

That also meant a lifejacket that fits, not a child in an adult's lifejacket; it must be appropriate to the conditions and the person wearing it, otherwise it might not do its job, Lyndon says. At the end of the day lifejackets save lives.

All vessels must also have a means of communication on board. That could be as simple as taking a cellphone in a sealed waterproof plastic bag, but if you're venturing into areas where

coverage might be a bit patchy a VHF radio is a must, he says.

Mr Cleaver says no-one enjoyed issuing infringement notices for non-compliance and while safe boating education was the message, defiance of the rules would attract an infringement fee.

The rules were in place for one reason, to help people survive in what can be an unforgiving environment.

Other advice to follow, as always, was for boaties to check weather forecasts before leaving shore.

"It's not hard to get one these days; they're on the internet, in the paper, on the radio. A simple phrase, "Weather – if in doubt don't go out"

For a full list of the boating rules, as well as Southland's Navigation Safety Bylaws, go to [www.es.govt.nz](http://www.es.govt.nz).



**Environment Southland staff member Garry Telford provides information on safe boating to a family group on Lake Te Anau. Photo: Barry Harcourt.**



# Become Brucie's buddy

**Calling all environment buffs - Bruce C Gull wants your help and to be your pal!**

Brucie, as he is known to his friends, already has hundreds and hundreds of buddies around Southland and he's keen to take more under his wing to help him spread the environmental awareness message.

To help out it's easy - you can become Brucie's buddy.

Julie Clifton, who is an Environmental Education officer and shares an office with Brucie at Environment Southland, says becoming a buddy of her feathered friend is a great opportunity for young people to learn about the environment they live in.

But most of all, when you become a Brucie's Buddy there's plenty of fun in store, she says.

The buddies must be aged between 4 and 14 years old and live in Southland but other than that anyone can join.

Each buddy will get four newsletters in the letterbox (you know that thing at the front of your house with a number on it) a year, called Brucie's Buddies Bulletin, with reports on his travels around the province.

The bulletins are also jam-packed with fun stuff to do like competitions and activities, but there's loads of other



**Buddies are invited to Brucie's birthday party, which is held at a different place each year around Southland.**

helpful information and simple tips about how you can look after the environment at home.

You'll also find out about Brucie's animal friends Ellie the Eel, Tiaki the Tuatara, Albert T. Ross, Tessa the Tui, Sam the Ram and Della Tidium, and learn ways to help care for their different environments.

Kids can write to Brucie if they have questions about the environment, and he'll be happy to answer, sometimes with the help of his other friends at Environment Southland.

Julie says there also heaps of other cool things about being Brucie's buddy, like a special birthday greeting from Brucie each year and an invitation to his own birthday party.

At his birthday party earlier this year at the Waihopai Dam, buddies came from as far away as Te Anau and everyone had heaps of fun.

So, it's fun, you learn heaps and get invited to a birthday party! If you haven't already, you can sign up to being Brucie's Buddy by visiting [www.es.govt.nz/for-schools/bruce-c-gull](http://www.es.govt.nz/for-schools/bruce-c-gull).

## 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 December 2011.

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