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# **BROADSHEET**



NEW ZEALAND  
ASSOCIATION OF  
**RESOURCE**  
MANAGEMENT

**April 2006**

**NEW ZEALAND ASSOCIATION OF RESOURCE MANAGEMENT**  
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Broadsheet is a newsletter of the New Zealand Association of Resource Management. Authors must be consulted before their articles are cited in publications.

The Editor welcomes correspondence, reviews of recent publications, interim reports of current research or resource management issues, news items, other articles, and lighter items about members activities and career movements. Unless specifically indicated otherwise, opinions expressed in the Broadsheet are not to be regarded as the official view of the Association. Copy sent by E-mail is preferred, although typed copy is also acceptable. Items can be sent to:

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## Editorial

Dear All,

Welcome to another edition of your Broadsheet. It's a bit light this time around – NZARM members seem to be a reticent lot, and I've only received a handful of submissions over the past couple of months. Not that it bothers me much (less work for me ☺); my job is to collate and edit the material into a cohesive little booklet. It is, however, a sad little reflection on what NZARM has become. For those who might pipe up; "It's your job to get material for Broadsheet", all I can say is that I didn't sign on to constantly beg, nag and harangue people for material. NZARM should be more professional than that.

We have a couple of letters to the editor this time around. The first is from 1948. While I found parts of it difficult to follow (common anecdotes & phrases have changed a lot since the 1940s), it reinforces the idea that some things never change. Dex Knowles 'blew his mind' recently (his words, not mine), and there's quite a bit on Dex's 50-year public-service celebration. We also recently lost a key person in the soil conservation field – Murray Jessen – so we have a few words from his close colleagues.

Also included is a soapbox section for anyone with an opinion about NZARM, Broadsheet, or the management of NZ's resources (or perhaps the lack thereof). This has always been an implicit part of Broadsheet, but few people take the opportunity to use it. It's worth reinforcing that the soapbox rave is about OPINION, and everyone has an opinion about something. The more eyebrows it raises the better, just as long as it doesn't get too personal or loony tune. On that note, feel free to comment on my editorial, or my introductory soapbox rave about NZARM and resource management in New Zealand.

Despite my introductory comments, it's important to say there's a core of members who regularly make good and valued submissions to Broadsheet. So thanks to these guys, and keep up the good work (without them we probably wouldn't have a Broadsheet).

Cheers

**Andrew Manderson**

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## Letter to the Editor 1 – Dex Knowles

Dear Sir

### Appreciation

I write to express my appreciation of NZARM's recognition of my having completed 50 years service in local and central government in the field of land and water resource management. The occasion was cunningly orchestrated around a regional workshop on riparian management convened by the Taranaki Regional Council Land Management staff. A celebratory dinner was held at the Pukekura Raceway in New Plymouth with over 40 persons attending. Within those attending were a few old soil conservator friends from the past, including Graeme Anderson, John Hogg and John Garrett. Many others tendered apologies and sent messages of goodwill.

The event was highlighted by an audio visual presentation entitled "*This is Your Life*" which had been put together in a secret operation involving collusion between Cheryl Newport and Don Shearman with input from my wife Pam and other members of the Association. It was based on historic photographs and video interviews with such notable persons as Lofty Kelman, Basil Parkes, Ron Sutherland and Chris van Kraayenoord. Dave Cameron acted as MC on the night and he along with others recalled various events with which I have allegedly been involved in the past.

The presentation by NZARM of a stone carving representing a local landscape was made to commemorate my 50 years service. This is an object that I will treasure in the future.

The evening was quite "mind blowing" and I was very humbled by the event. I again express my sincere appreciation and thanks to those that attended, to those that were unable to attend, to those that sent personal messages, to the Association and to my friends and colleagues that made the event happen.

Yours faithfully



Dex Knowles

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*Eds. Note: A feature article about Dex is on page 24.*

## Letter to the Editor 2 – Graheme Anderson

[March 2006]

Dear Andrew

While carrying out bottom trawling in my desk prior to shifting I came across this gem.

The Sheep Industry Commission Report came out in 1948. As one of the second group of Soil Conservators training at Lincoln in 1949, our future looked anything but assured. But look what has happened 60-years on. The writer is obviously a land owner in the Wairau Catchment. Wither Hills became a Soil Conservation Reserve.

Regards,

Graheme A.

Dear Sir,

Replying to questions set out by your circular (re: Sheep Industry Commission), I can only state that I have only one problem, that of procuring pollard which is off the market and unprocurable for making the best rabbit poisoning agent known to me, Phosphorised Pollard. There is a substitute, Government manufacture, which is only mucked up rubbish; its only value being the container. Then there is the shadow of soil erosion hanging over the hill farmer's head, together with mooted cranky Catchment Board. Erosion made the Wairau Plan, the same slow progress of evolution has gone on and on, before Adam was propped up against the paling fence to dry, and will go on in spite of two chances, Bulldozer Bob's and Buckleys. I studied Astronomy once, - damn near made me an Infidel.

If frost of high altitude severity could be modified with its power of lifting soil and rocks by its crystal forming inches high above ground level, wind, rain, snow, avalanches and cloudbursts etc. could be eliminated there may be some hope of stabilising the high country, by a few Cranks, Ragsellers, Plumbers, Swivel Chair Experts and Ex Politicians who do not lead Marlborough intelligence up the garden path for long.

Evolution will go on till the crack of Doom, banking rivers against Nature, the river bed rising higher than land adjoining. Nature's method is to raise the land along with the river bed, the only alternative to artificial banking is to dredge the river bed. Burning is the life of stabilising hill country, by judicious burning of fern and scrub at the proper time. The Wither years-ago went up in smoke annually in January. Last January was no exception to the Rejuvenating area, Molesworth carpet-grass basin burnt for days at the head of the Severn, April, 1945. Who lit it? The general public must not be told of

that, it just does not suit to advertise these happenings mixed up with the other hooey printed.

If any Catchment Board is needed it should comprise a Board to catch cranks and deal with them in a fitting manner. To plant a tree in any of the high country, its only chance of survival would be under the bed. When the Town manages the Country, its time someone spoke up for the benefit of all concerned, including the dependent town. The Country man would not dream of poking his nose into manage a Town business. Even "Dad" of Snake Gully discovered that the Lavatory on the Passenger planes was not to be used while the plane was flying over the Cities; that was reserved for the farmer on the back of the neck.

I listened to a Lincoln College Expert in my Burg who stated by feeding the ewe through winter, she should produce a lamb 20 lbs [ed: 9kg] at birth. Before this expert gained his book knowledge he would not know Mary's Little Lamb from the Hydraulic Ram, possibly, and so the hooey and bunk goes on till its swallowed by others who don't know better.

These subjects need an abler pen than mine to be rightly describ'it.

Even Uriah Heep found out there was such a thing as being o'er humble. The first consideration is to keep the Town free of floods, others can go hang. This attitude will breed contempt until you see Town vs. Country hostility. The Country man, when visiting Town, will be wearing a sprig of Mistletoe on the tail of his coat.

Blenheim will be flooded by the Wairau some time in the future. Scouring will go on with little interruption; anyone knowing the high country knows that too much cold snowy water will give anyone the scours.

Yours sincerely,  
[unknown]

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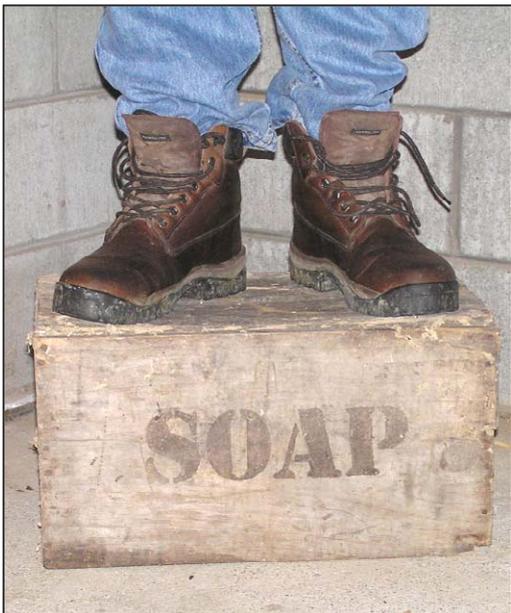
## Soapbox rave – Andrew Manderson

Tell Joe or Jane public that you're a proud member of NZARM and you're likely to come up against a blank expression. Submit a 'strongly worded' letter of concern to some political body on behalf of NZARM, and you'll get a politely worded 'your concerns are duly noted' (but of no concern to us). NZARM is no Fish & Game, and I'd even suggest that we have a profile less-prominent than the NZ Soil Science Society or the Grasslands Association. We're not a well-known organisation, nor do we have any collective political clout.

A low profile is all well and good if that's what members want – a cosy little collection of colleagues from up and down the country, with a somewhat confused purpose that flips between modern-professional resource management (the official party line), and an 'old boys club' for soil conservation (what tends to happen in practice). But, the thing is, NZARM can be so much more than what it is.

NZARM is doing many great things at the moment (I can think of three after a bit of effort) (just kidding). Conferences are always good; there's the occasional regional workshops; that CPRM thing; the website; and of course, Broadsheet. There's even a discretionary \$1000 award available. We're not doing too badly for a small self-funding organisation. However, membership levels are modest; public awareness of NZARM and resource management in general is less than it could be; and given that NZARM's money comes from you and me, are we getting the value we expect?

For those cynics out there, I'm not actually angling for a position on the next exec. Egad no! Nothing could be further from the truth – being editor is unrewarding enough (and besides, from what I understand, you need to be shoulder tapped to be 'elected' now-a-days). Also, effective decisions by a committee of any type are few and far between in my opinion.



And this is exactly what this short rant has been about. Some of my opinions. I've got heaps of others. Like why are we still regurgitating resource management principles & practices developed in the 1940s (albeit with new names like 'integrated catchment management', 'whole farm planning', 'best management practices'); we already know these things work. Similarly, why are we still relying on expert opinion & empirical techniques of the 1950s when we live in an age of spatial technologies and a vacuum of much needed environmental facts? (for individual farms). How many resource managers actually know how to use something as common as a GIS for resource management analysis?

Perhaps I'll take these up another time (please help avoid this – send in your own opinion or letter to the editor).

# Regional Roundup

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## Bay of Plenty

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**Norm Ngapo** has been busy doing a range of work for Environment Bay of Plenty - catchment surveys, erosion assessments following floods, processing resource consents, as well as Soils and NZLRI reports in the Whakatane District. Took a few days out to check out the Coromandel Peninsula, including phoning John Whale at work while fishing in the Coromandel Harbour (just to be sociable) - John was not amused!

**John Whale** and **Ruth Feist** have finished mediations (we think) on appeals to the Environment Bay of Plenty Regional Water and Land Plan with some good outcomes, although it looks as though some residual matters will go to the Environment Court. Oh well, it was a long shot that we would get through without court time.

“Rule 11” the nutrient management requirement rule for land use around the Rotorua Lakes is being implemented.

The first of the individual lake reviews of “Rule 11” is underway with Ruth and **Andrew Wharton** meeting with rural landowners at Lake Okareka recently.

John is also working with his Environmental Planning staff on:

- the review of the On-Site Effluent Treatment Plan (one appeal being negotiated),
- changes to the Regional Air Plan (mainly to provide for NESAQ and HASNO),
- review of ‘where to’ on the controversial proposal for Coastal Occupation Charges in the Bay of Plenty CMA,
- evaluation of all the information on Aquaculture Management Areas,
- Vehicles on Beaches policy,
- projects to review Coastal Plan mapping information and
- the review of the Rotorua Geothermal Regional Plan.

**Wayne Smith** has been busy with coordinating, facilitating and providing input to a multitude and variety of projects and initiatives ranging from biodiversity action plans to SLM BMP’s and database development. He has organised the next National Land Monitoring Forum for early May when the forum will progress national guidelines for soil health and soil disturbance monitoring.

Due to temporary indisposition of his 15hp outboard he has lately been crewing on **Norm Ngapo’s** 10 footer in successful quests for snapper off the beach. He’s decided it’s better to be the skipper as he stays drier that way.

What's **Lawrie Donald** been up to? Don't know but he sent this:

*When a woman wears leather clothing, a mans heart beats quicker, his throat goes dry, he goes weak at the knees, and he begins to think irrationally.*

*Ever wonder why?*

*Because she smells like a new ute!*

## **John Whale**

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## **Taranaki**

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**Don Shearman**, has been busy organising a NZARM regional meeting to look at Taranaki Regional Council's riparian management programme. Coincidentally, this coincided with **Dex Knowles** having just completed 50 years public service in the soil conservation/resource management field (separate articles to follow). Appropriately, a celebratory dinner was also held to mark this epoch.

**Darren Scown**, has been organising willow control in some of the regionally significant wetlands he is looking after. An inventory of 76 Regionally Significant Wetlands has now been updated and includes true GIS measured areas, protection status, health, LENZ descriptions which are all integrated with various databases.

**Kevin Cash**, is busy monitoring plans and taking plant orders. Kevin also has a background in forestry so is assisting with forestry harvesting investigations on the side.

**Kara Prankerd**, has unfortunately resigned her position as Land Management Officer to complete her masters in ecology at Massey University.

**Jason Loveridge** has finally applied to join the "Club". Jason has been with the Council for over 5 years, concentrating mainly on hillcountry farm planning. Jason has recently organised a workshop/field day on the "Effects of Intensification on the Environment". The day went well with some interesting presentations, followed by excellent examples in the field.

### **NZARM Regional Meeting (TRC's Riparian Management Programme)**

Interest was expressed at the last annual conference to examine Taranaki Regional Council's riparian management programme. Consequently, about 35 people attended a seminar and fieldtrip on the afternoon of Thursday, 16th February, followed by a further fieldtrip on Friday morning. An opening paper was delivered by Director of Operations, **Dex Knowles**, on the history of water resource management (which is reproduced in its entirety). Following Dex's paper, Senior

Scientific Officer of Water Resources, **Chris Fowles**, gave a powerpoint presentation on Riparian Management and Surface Water Quality, which is summarised below.

### **Water Quality and Riparian Management**

The Taranaki ringplain is noted for the large number (more than 300) rivers and streams which flow from the pristine habitat of the National Park over an average distance of 25 km through dairying farmland ( and townships) to the coast. The high water quality of the upper reaches is affected downstream by farmland runoff (point & non-point sources) in particular, but also by treated wastewater discharges from municipal and industrial sources. Fortunately, the short, steep nature of these streams, regular frequent rainfall (particularly in the headwaters), and extensive compliance monitoring programmes maintained by TRC, reduces the impacts of land usage on the water quality of ringplain streams to the extent that unsightly algal growths, degraded macroinvertebrate communities (indicators of poor “stream health”) and elevated nutrients and bacteriological concentrations are confined mainly to the lower reaches of the streams and limited to short durations, usually during extended low flow periods.

Riparian planting initiatives will enhance physicochemical water quality and improve physical habitat and biological communities along the length of these streams, particularly towards the lower reaches where the majority of amenity and contact recreational usage is focussed. Monitoring of these improvements, a long-term trend approach, has been instigated by the TRC within the ambit of state of the environment monitoring (SEM) activities. A number of these programmes have been integrated to meet various SEM requirements but in particular, the focus has been placed on measuring indicators which are meaningful to the general public ie. algal cover, bathing water quality, water clarity, water temperature and macroinvertebrate stream health measures (MCI). While immediate improvements in some of these measures should occur as stream margins are fenced (cattle access prevented), other improvements will be more subtle and gradual as riparian vegetation planting takes effect and catchment coverage becomes more extensive. The riparian SEM programme for the ringplain water quality recognises these factors and has been designed accordingly.

### **Taranaki Regional Council Riparian Management Programme.**

**Don Shearman’s** powerpoint presentation covered water quality issues in Taranaki; Council’s riparian management policy development which led to its Riparian Management Implementation Strategy; the development of its operational programme (mainly through property plans to individual landowners); the support to farmers through its native plant scheme, through and to more recently, the synergies between Council objectives and the “Clean Streams Accord”. Key points were: the early identification of the effects of dairy intensification on water quality and the adoption of a strategy in 1993 after wide consultation with the public; the operational delivery of the strategy mainly through riparian plans which have gone from a comprehensive report format taking several days, to a GIS based product produced in a third of the time; a plant tendering system that provides over 200,000 plants a year to farmers in PB3’s at between \$1.90 and \$2.50 each; the ability to prepare a riparian plan for 90% of dairy farms by 2010 and the capacity to report accurately the level of implementation through monitoring and recording via GIS .

### **Local Farmer’s Perspective.**

Following Don’s presentation, **Roger Luscombe**, a local dairy farmer, gave his impressions of riparian management. In particular, the past effects of direct effluent discharges into the rivers

and the improvements to both water quality and farm management that fencing and planting streams have made to their business.

### **Fieldtrip 1 Effluent Irrigation**

After enough listening, it was time to take a short field trip to a farm owned by Riverlands Meat Company which was purchased with the intent of irrigating treated effluent derived from meat waste. As part of the consent process, all streams on the property were required to be fenced and planted in 2002. The farm has yet, not been set up or used for irrigating but is currently leased by a neighbouring farmer who uses it as part of his milking platform. The main issue of contention for this property is whether Fonterra will allow the effluent to be applied to a milking platform. There is a perception that irrigating meat waste effluent to the milking platform poses a potential health risk to humans and is not acceptable. Scientifically, however, the effluent doesn't pose a problem. Currently, Fonterra is allowing irrigation of effluent onto the other farms that Riverlands use. The riparian buffers were created to mitigate the potential for runoff into the waterways.

### **Celebration of 50 years Public Service by Dex Knowles.**

After the fieldtrip, a dinner was held to at Rough Habits Lounge Bar of the Taranakii Racing Club. Other notable guests, who couldn't make the meeting, joined us for dinner. An audio-visual compilation of Dex growing up, followed by a snapshot of his working career was presented on the big screen TV. Dave Cameron made a fabulous job of master of ceremonies and kept us amused with some anecdotes of Dex's early years at High School. Alan Campbell presented Dex with an andesitic sculpture of Mount Taranaki on behalf of NZARM. Dex replied and gave an account of some of the interesting happenings of his working life. Everybody enjoyed a buffet dinner followed by desert. During desert, some footage submitted by Dex's peers was shown, acknowledging this milestone and his past achievements. Following desert, the floor was opened for further anecdotes and tributes. The evening has been recorded on DVD. Some of the visitors from other regions also managed to lead some of the usually sensible locals astray.

### **Fieldtrip 2 Coastal Planting**

The majority of visitors managed to participate in a visit to a Farm Park development near Oakura. The property overlooks the coast with all building sites having ocean views. The concept involves all section owners eventually building a house, having a share in a farming operation as well as sharing community facilities such as a tennis court. A feature of the development has been the substantial revegetation of gullies and wetland enhancement planting projects. A nursery has also been established onsite to facilitate further planting. Coincidentally, this property was situated next to a winery overlooking the coast. It would have been rude not to have had morning tea on the balcony, sipping coffee and eating cream cakes waiting to catch a glimpse of the 6m white pointer!

Thankyou all to those who attended to help make the meeting and evening an enjoyable occasion.

**Don Shearman**

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## Waikato

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**Ross Abercrombie** and the EW Sustainable Agriculture team has carried out 2 field days with AgFirst and NIWA titled "intensifying your farm, what are the effects on water" with mixed turnout (one with 30 farmers, one with 5). People that attended had lively discussions with John Quinn regarding sheep and beef grazing, waterway protection and intensification. There will be another of these field days held the first Friday in May all things going well up in Coromandel somewhere.

Ross also presented to a packed audience out at Port Waikato (Limestone Downs farm) on Nitrogen and it's increasing use on hill country farms. Farmers now seem to be more accepting of nutrient budgeting and the need for this, and other work in drystock is pointing towards soil limitations to intensification hitting prior to productive limits. This may mean that even if you can get a farm system cranking with 200kg's of Nitrogen and more large cattle to mop up the grass, soil might fall apart short term negating benefits of economic gains. Watch this space...

Future focus for our Council, Integrated Catchment Management, more extension of Nutrient and stock exclusion regulations and some education around those rule, and using Landcare/Farm Planning in high value catchments to address water quality concerns.

**Emily O'Donnell** in the Coromandel - The new calendar year saw an even greater up take in soil conservation funding. This was flow on from greater promotion of the works and the uptake that had started towards the end of November. Budgets are now fully allocated and nearly 50% allocated for the next financial year. Works proposals have predominantly been around restoration work and biodiversity enhancement rather than the more traditional soil conservation structures and pole plantings.

Starting to achieve goals through linking landowners/properties together and see whole sub catchments/tributaries protected and enhanced.

The joint pest control operation by DoC and EW on 16500 hectare of both crown and private land saw awesome results and support from the surrounding communities. RTC of 1% was recorded in areas where aerial 1080 was applied and 8% in areas where ground based applications were used. The time spent by DoC and EW staff in joint consultation with the communities as well as the directly affected landowners paid off.

**Alan Campbell** - In February I went to the Fertiliser and Lime Research Conference at Massey. It was a good opportunity to mix and discuss issues with a key sector of the agriculture industry and I was impressed with the general willingness of the participants to recognise the importance of nutrient management in the future of agriculture. On reflection though I found it a bit worrying that the fertiliser industry representatives made no mention of planning for a general down-sizing over the next few years. It seems inevitable that the use of fertilisers will have to be much more constrained and targeted than has been the case so far and that will lead to reduced fertiliser sales.

The need to provide comprehensive nutrient management advice to consumers still seems to be treated as a threat rather than a market opportunity. It will require a new business model for this

to work, and it seems reasonable that the industry should be taking a leadership role. Fortunately I note that the fertiliser companies themselves are beginning to compete on the basis of the advice they provide and are upskilling their staff accordingly. This is a significant extra cost to them and cannot be resourced out of the earnings from reduced fertiliser sales. No doubt they will come up with a way to make that financially viable in the near future. One thing that is absolutely certain is that the Regional Councils are going to put nutrient management firmly on the farming agenda, so there will be a significant demand for good, reliable advice and whoever can provide it will be in a position of some leverage.

I was also fortunate to be able to attend the regional meeting in Taranaki where we had a fascinating seminar and a couple of really good field trips. The weather was uncharacteristically calm, warm and dry which contributed nicely to a great visit. The highlight of course was the opportunity to acknowledge and celebrate Dex Knowles' fifty years of public service. It's a bit difficult to reconcile that with the sprightly young figure he cuts, but there's no denying the record he has amassed. It was a great night for those with the staying power to see it through to the wee small hours. Heartfelt thanks to Don Shearman and his team for the event, and congratulations to Dex on an extraordinary achievement.

I've also been working on the development of our ICM approaches, liaising with Fonterra and Dexcel, and I've set up a regular liaison meeting with Waikato Federated Farmers. We're fortunate in the Waikato to have very positive and accessible people in all of those agencies.

Also of interest to members is the CPRM process which we have now taken over. Applications close on 31 March and we will have a meeting of the committee in mid-April to confirm the certifications. For more information about this, contact me at [alan.campbell@ew.govt.nz](mailto:alan.campbell@ew.govt.nz)

**Michelle Gibbs** - I have recently finished as a Land Management Officer and have just started a new role within Environment Waikato as Environmental Officer for the River and Catchment Services Group.

My new role sees me becoming more involved with the environmental and consenting side of the river works and land drainage activities that River and Catchment Services undertakes. I have recently been involved in writing management plans and an oil spill contingency plan for some erosion control and river management work that EW is undertaking in the upper part of the Waikato River. I'm also involved with planning a wetland restoration project on Environment Waikato land (to meet a resource consent condition) and am continuing to work with Waikato RiverCare, a care group focused on planting native plant species on the banks of the Waikato river north of Hamilton.

**John Quinn** (NIWA) and **Sally Hobson** (AgFirst) have run five more workshops/field-days on "Intensifying your farm: What are the effects?" with support from Regional Council staff from EBOP, Gisborne District, Hawkes Bay, Horizons and Taranaki and a host farmer in each region. With help from **Steph Parkyn**, they plan to complete 15 of these MFE funded workshops before June.

**Karyn Hopkins** has been working with land owners on the lower stretch of the Mangapiko Stream (mainly Pirongia end) with Peter Cullen, to address some stream bank erosion and vegetation congestion issues. This is part of an ongoing programme over the next 5-6 years. The Mangapiko Stream Care group has formed, consisting of landowners who back on to the stream. I have also been looking into similar, but not as problematic, issues on the Karapiro Stream. I have also followed up with some landowners where some historic soil conservation works were undertaken in the Waipa catchment 10-20 years ago. I have continued with ongoing Clean Stream and Soil conservation works. I attended to Wetland symposium that was held at Waikato University in February.

**Sue McConnochie** is focused on pulling together financial year end data and forward planning for the 2006/07 year. Sue has also been busy with Clean Streams, Soil Conservation projects, EW On farm Services, stream care principles and the Farm Environment Award.

**Bruce Peploe** has been heavily involved in the Environment Waikato LTCCP process. See later article for more news.

**David Perry**, well I have been busy with the final stages of the capital works on the Tauranga Taupo River scheme. EW have contractors currently working on the construction of rock armour erosion protection works and formation of a gradient control structure in the bed of the river. Works are being carried out by Kerepehi Transport Ltd and are will be completed by Easter.

From January to March 2006 I have been heavily involved on managing contracts to extract gravel from the Tongariro River in Turangi. The work was carried out by Cashmore Contractors of Wanganui (a trading Division of Inframax Construction Ltd). 25,000 cubic metres of material (gravel, sand and silt) was excavated from the channel and transported to processing and deposition sites. EW's current consent allows for 50,000 cubic metres of material over 3 years so next summer EW will be looking to get back into the river again.

I have also been managing contracts for works on the Waimarino River and works to clear an outfall channel on the Tauranga Taupo River.

It is perhaps timely to note that since the last edition of Broadsheet, **Michelle Gibbs**, **Sue McConnochie** and **David Perry** have all become engaged. Must be something in the water/air in the Waikato – any theories?

**David Perry**

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**Nelson - Tasman**

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Nothing from Nelson - Tasman this time.

**Mary-Anne Baker**

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## Canterbury

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Nothing from Canterbury this time.

**Dave Maslen**

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## Otago

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Nothing from Otago this time.

**Nicola McGrouther**

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## Marlborough

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Nothing from Marlborough this issue.

**Paul Williams**

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## Gisborne

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No Regional Round-up from Gisborne this time.

**Peter Fantham**

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## Wellington - Wairarapa

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Nothing from Wellington – Wairarapa this time.

**Dave Cameron**

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## Auckland

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Nothing from Auckland. [Amy, if you read this, please get your IT people to sort out why our emails keep getting bounced back].

**Amy Taylor**

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## Hawkes Bay

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No Regional Round-up from Hawkes Bay this time.

**Simon Stokes**

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## Southland

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### **Coastal Dune Vegetation Network Conference**

The Coastal Dune Vegetation Network (CDVN) held its annual conference in Invercargill from 1 to 3 March 2006, in partnership with Environment Southland and Invercargill City Council. This was the first time that this conference was organised in Southland. About 100 delegates, from throughout the country, drawn mostly from regional councils, territorial authorities, scientists from FRI, and community group members who are currently involved in coastal management.

The mission statement of CDVN is to provide a forum for the free exchange of information on sustainable management of coastal dune ecosystems with emphasis on the use of vegetation to restore natural character, form and function. The dunes of Southland are a dynamic natural buffer between the land and marine environments and have been recognised as being of national importance for the conservation of native dune land flora.

The theme of the Conference was “Coastal Management – the Southern Way”. Following the welcome address by Chairman Stuart Collie, Laurel Tierney (Chair, Fiordland Marine Guardians) has delivered the keynote address ‘Coastal issues in the New Zealand Environment’, which was well received by the participants.

In addition to regional & national round-ups, there were five technical sessions in the Conference, including coastal planning and management, coastal dune management, estuary management, threats in coastal areas and coastal biodiversity. Staff from Environment Southland, Department of Conservation, Invercargill City Council, Southland District Council, University of Otago, Cawthron Institute and members of community groups have presented talks on various issues pertaining to coastal planning, vegetation, biodiversity, monitoring and management. As part of the Conference, field trips were organised to various areas of interest in the coastal region to view and discuss issues such as dune rehabilitation (Fortrose & Otara), coastal erosion and coastal subdivisions (Waikawa and Colac Bay) etc.

The general feedback was very positive about the Conference that provided an excellent opportunity for participants to learn/share a range of important issues relating to coastal management.

### **Annual Environmental Monitoring Report**

The Annual Environmental Monitoring Report continues to provide a summary of the year’s monitoring results and, along with the more comprehensive information provided in our State of the Environment Reports, they also

- identify and understand changes in quality and quantity of our environment and natural resources
- be in better position to make informed choices and decisions about how we use our resources, and
- convey information about our natural resources to the Southland and wider community.

Making technical information readable and accessible to a wide and diverse audience has been the challenge in our Annual Environmental Monitoring Report. Among the many changes in style and format, the Report is now a package of three related products:

1. *Report Cards* which summarise the results of our air, water, and coastal environmental monitoring.
2. *Background Information* on each reported work programme, with details on the monitoring objectives and design.
3. *Data Tables* that provide supporting detail for each report card.

All of these products can be viewed on the web site. The report cards are also available in hardcopy by contacting Environment Southland.

### **The Southland Wetlands Working Party**

The Southland Wetlands Working Party is the joint force of a diverse bunch of people representing local government, environmental agencies and community interests to address wetland management in Southland. This group since its establishment in November 2004 has focused towards generating interest and raising awareness of wetlands, and determining incentive measures that various members of the working party can provide that will aid landowners with the management of wetlands.

Southland has several significant wetland areas, some of which are internationally important and all of which contribute to the unique biological and geographic character of the region. Our goal is to help foster a greater understanding of and appreciation for our wetland areas so that they will continue to be part of the landscape for future generations

#### *Landowner tool kit*

The working party has explored the options for promoting the protection of wetland areas in Southland and as a first step are compiling together a tool kit that will include a whole lot of useful information on what landowners can do for the protection, enhancement and creation of wetland areas in Southland. The tool kit will include information on incentives for protection and enhancement of wetlands in Southland such as advice and assistance, money for fencing, assisting with covenant processes, and possible monetary assistance towards acquisition of key areas.

#### *Promotion of wetlands and feeding information to wetland landowners*

The June 2005 edition of "Envirosouth" (a Southland Regional Council publication) included an invitation to landowners to come forward with information about their wetland areas, and to tap into the knowledge of the members of the Working Party for advice.

The invitation to landowners included information to help landowners identify any wetland areas on their property, and to promote the benefits of wetland areas as an integral part of the productive farming landscape. Ensuring that there is understanding of the benefits wetland areas offer in terms of habitat, water quality, recreation and culture was one of the aims.

## Update on Didymo Trials

Didymo (*Didymosphenia geminata*) was found in the lower Waiau and Maroroa rivers in Southland in October 2004. This was the first time it had been recorded in the southern hemisphere. It has now been found in other rivers in Southland, Otago, Canterbury and Tasman. It's here, it's established and it is spreading. Now the issue is can it be managed.

Biosecurity New Zealand are the lead agency for the response to the didymo incursion. They are funding trials to determine whether there are effective means to control didymo. The control trials will identify and test control methods to assess an agent's effectiveness as a toxin to didymo and as a disrupter of stalk formation. The impacts on non-target biota will also be investigated. The feasibility for successful delivery in affected waterways, risks which could affect success, duration required for effective control, and cost to implement over large scales will also be evaluated.

The trials will go through 3 stages:

Stage 1: Product screening - Screening trials using small-scale in-situ experiments will test the effects of a range of potential biocides, from which at least 2 of the most promising formulations will be selected.

Stage 2: Product testing – Testing using stream-side channel trials will determine the mortality on didymo and effects on non-target biota. This latter part will also be done using laboratory toxicity bioassays with flora and fauna that would normally reside in the target rivers and;

Stage 3: Control/eradication trial - Large-scale control/eradication trial on a selected river braid or tributary.

A science open day will be held on April 11 for local body councillors, media and some scientists to view the trials in action.

For more information on didymo and the control trials, go to [www.biosecurity.govt.nz/didymo..](http://www.biosecurity.govt.nz/didymo..)

**Bala TikkiSETTY**

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## Northland

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### WHAT'S HAPPENING UP NORTH?

The Northland Regional Council land management team has been enlarged with the appointment of **Vince Lane** as the Catchment Management Officer. Vince has given up the ivory tower life at Auckland University for a hands on field job. It also saves on weekend commuting, either for Vince to Whangarei or Kerry to Auckland.

Vince's job is to coordinate Council activities within a number of catchments draining into harbour in which there are oyster farms. At the top of the priority list are Whangaroa Harbour, Te Puna Inlet in the Bay of Islands, and the Arapaoa River arm of the Kaipara Harbour. In each of these areas the viability of oyster farming is threatened by poor water quality. While the point sources are largely under control, there is a lot of work required on non-point sources of contaminants. These include runoff from farmland, poorly performing septic tank soakage fields, runoff from roads, quarries and a whole range of other largely rural activities.

Land Management Team Leader **Bruce Griffin** will be looking for another land management officer in June-July. The demand for advice from dairy farmers wanting to implement the Clean Streams Accord has outstripped our limited resources. We have also agreed to work with Meat and Wool New Zealand to promote environmental farm management practices via their Monitor Farms. While Kate Banbury has now almost completed farm mapping and the preparation of environmental farm plans within the Lake Omapere catchment, she still won't have enough time to meet the demand for farm planning advice. Based on her efforts in promoting nutrient management at field days, seminars and conferences over the last few months, we suspect she may be considering a stage career.

**Kathy Mortimer** is enjoying her new role, and a bit more spare time, as Environment Fund Co-ordinator. With plans to increase the Fund to \$400,000 in the 2006-2007 year and Kathy's success in accessing Biodiversity condition Fund money, there is a lot of good work being done out there by landholders and community groups. The Council now has a Coastal Care Co-ordinator, Claire Nyberg, who already has some sand dune restoration groups up and running.

**Lisa Forester** has filled **Bruce Griffin's** former position of Biodiversity Officer, bringing some much needed botany skills to the Council. The Council won the double when we poached both Lisa and her husband **Don McKenzie** from the Department of Conservation. Don is our Biosecurity Team Leader, replacing **Matthew Hall** who has joined the Animal Health Board in Wellington. It is interesting that we are still receiving correspondence from the Animal Health Board addressed to Matthew; he is obviously keeping his head down.

Some NZARM members may remember **Ian Palmer**, a former member of the NRC staff. Prior to that Ian had a successful career in MAF and was responsible for raising the standard of Perendale sheep in Northland. Ian turned 70 a couple of weeks ago and was most surprised when a number of our staff dropped in on him for lunch.

The Hazard Management Team is up to its ears in preparing river management plans and doing real work. The Council took over the Awanui River Flood Management Scheme last July and Ben Leeuwenburg, River Management Technical Officer, now has contractors clearing the channel through Kaitaia. The locals opted for a six-year programme to restore the scheme to its as-built condition, funding the work from rating revenue rather than a shorter programme funded by borrowing. **Glen McIntosh**, River management Officer, is still waiting on enough rain to calibrate his flow model on the Awanui River. We have been waiting over two years now, showing that you don't really have to do works to reduce flooding, just develop a model.

While Ben is working on the Awanui Scheme and half-a-dozen smaller river works, **Bob Cathcart** is taking a Draft Flood Management Plan on the Kaihu River through its public participation process. This is an interim plan under which the Council will manage the river over the next three to five years while it carries out investigations and prepares a much more comprehensive plan.

### **Bob Cathcart**

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## **Manawatu - Wanganui**

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Horizons Regional Council now has a new location for our Wanganui Office, no longer in between the courthouse and the Wanganui computer building. After years of wanting to, **Dave Harrison** has moved to the new Wanganui office from the Marton office, much closer to home. **Verity** and **Louise** have been working with LandVision producing farm plans in the Wanganui catchment. Two are finished and four on the go.

**Richard** is working with LandVision on a farm plan in the Kawhatau valley. **Kevin Rooke** is also nailing into a bunch of farm plans, in conjunction with LandVision in the Pohangina Catchment. **Grant McLaren** is putting time into his three priority catchments, all near Pahiatua. The Sustainable Land Use Initiative is taking shape rapidly, and is all set to roll in the new financial year, with or without central government help.

I have been doing a variety of odd jobs including looking into dairy shed effluent consents, nitrogen use on the Kimbolton monitor farm and mapping Highly Erodible Land – HEL – a place in the Manawatu.

Sorry if I have left some people out.

### **Malcolm Todd**

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## From the secretary's desk

Tabitha Manderson

### New Members

*Judy Lawrence:* Qualified as a Soil Conservator 1979, worked for Waikato Valley Authority and NSW Soil Conservation Service in Australia. Undertook work in forestry operations and mining guidelines, water quality standards, urban capability mapping, flood plain management and hazards mapping and policy guidance.



A foundation manager at the new MfE managed a range of portfolios, including pollution and waste management, lead in petrol, nuclear impacts, packaging, irradiation, new organisms, geothermal issues, and biosecurity threats; climate change and the integration of the water and soil functions into the Ministry; floodplain management guidance for local authorities based on NWASCA policy; ozone layer protection; energy sector reforms.

At the NZ Dairy Research Institute developed a dairy industry-wide environment strategy covering production, processing and marketing, as a basis for the dairy industry's environmental improvements.

As a consultant to the OECD I contributed to the Sustainable Development Policy and Analytical Reports for the 2001 OECD contributions to the Rio plus 10 conference in Johannesburg, especially on climate change, transport, energy and decision-making and managed the consultation processes with NGO's, business and trade union advisory groups for the project.

As Director of the NZ Climate Change Office at the Ministry for the Environment I set up the implementation of the government climate change policy and took part in the development of the government sustainable energy framework.

Now as Director of my own business I provide strategic advice and brokerage on leadership, governance and organisational development and about science, sustainable development, climate change and energy in New Zealand to a range of public sector and local government agencies and internationally.

I am especially interested in the development and enhancement of resource management capability in research, strategy and operations, to address the big resource management issues that face New Zealand now and in the future. I welcomed the opportunity to contribute through NZARM.

*Jason Loveridge:* (no background provided).

**What have the exec been up to?**

The Executive had a face to face meeting in December 2005, and has had two teleconferences since then (we now use teleconferences to save time and money, but still regularly keeping in touch and things ticking along).

Despite being a small association compared to some, there is still a fair degree of administration that needs to be dealt with. Memberships and resignations, regional meetings, CPRM and conferences take up a fair bit of time.

At the December meeting it was decided to toughen up on some members that had not paid their membership fee for some time. These members were informed that if they did not pay monies in full they would accordingly be removed from the database (as per Section 11.2 of the Constitution). This has led to some further discussion regarding how some seem to view membership and the responsibility members have to inform the Executive if they wish to resign. Keep watch for the AGM this year, there may be a change to the constitution proposed.

The Executive decided it was appropriate to contribute to the Regional Meeting that was in part to recognise the role that Dex Knowles has played in resource management in NZ for many years.

The administration of CPRM has now been taken over by the NZARM secretariat with the aim to streamline the process. How CPRM can continue to develop is a topic of ongoing discussion.

The President passed on thanks to the organisers of the successful 2005 conference. While the final financial matters are yet to be finalised (waiting on paying a bill or two) the 2005 conference is noted to have been a profitable one, both financially and in terms of positive feedback from a range of people and organisations.

The 2006 conference planning is well underway, keep 20 – 24 November free for attending this conference. The 2006 conference will be held in Christchurch and will be a combined meeting with the New Zealand Hydrological Society and the New Zealand Meteorological Society. "Resource Management under stormy skies: Water allocation @ the cross-roads?" Keep an eye on the NZARM website for more details.

The next Executive meeting is scheduled for in May.

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## Feature article: Dex Knowles – There is always a practical solution.

David Bruce (Newspaper reporter)

*Some of you will be aware of the recent 50-years public-service celebration for Dex Knowles. A reporter was contracted to prepare a short piece on Dex. In case you missed it, the article below is the original text. Dex takes no responsibility for any misquotes or incorrect information. – ed.*

EVERY time Dex Knowles considers retirement, something interesting comes along to keep him at work.

Fifty years on from the day he first began work as a soil conservator he is still at it, perhaps the most experienced man in his field in the country and with a reputation to match.



It was early days for his profession when he first joined the Wairarapa Catchment Board on 6 February 1956. ("Actually it was quite an auspicious day, later on the Government got round to commemorating it by calling it Waitangi Day," he recalls.)

Signed on as a junior assistant, his role was that of an apprentice, learning the ropes of soil conservation from the likes of Murray King, a pioneer of soil conservation who kicked off the first conservation programmes in the early 1950s.

"There was nothing before 1947, prior to then the priority was on breaking in the land, not conserving it."

His early experiences were those of a boy in a man's job, developing farm plans and surveying individual properties for erosion control and farm management programmes. On the enormously unstable hills of the east coast he developed an understanding of what he later considered his forte, the selection and planting of the right species of erosion inhibiting trees.

On the flood prone rivers he learned the techniques of building debris inhibiting dams and flood protection dams . "The first of those was a series of four on a river near Masterton, bloody great earth dams with a pipe through their bottom." The pipes were big enough to take the normal river flow and an acceptable volume of flood flow, the dams there to skim the peaks of a flood.

Out of his "time" and a fully fledged assistant, he was the first to design a catchment control scheme over an entire catchment area. A 200square mile project involving 100 farms and farm plans and 26 miles of willow clearing. "You got to build close relationships with the cockies on a scheme like that and, as in those days there were

government incentive schemes running, part of the job was to ensure they were uplifted." He was also involved in the flood diversion schemes around Lake Wairarapa and worked alongside Dutch reclamation experts as part of the lake was reclaimed, both to encourage water flow and add to the districts farming potential.

"It's not the sort of thing we would even consider these days, but there are probably 8-10 dairy farms there now that are on reclaimed land."

1960 saw promotion to senior assistant status and a move to Napier and the Hawkes Bay Catchment Board. He took his Wairarapa experiences with him into a much bigger district with bigger projects. Bigger planting programmes and bigger flood protection schemes. "On the Heretaunga plains we were into flood protection in a big way."

He also took with him his new wife Pam and discovered during his time in Hawkes Bay that he had a flood prone family; the births of their four children all coincided with floods and their aftermath. In Hawkes Bay he also discovered another mentor, Ron (Bulldog) Drummond, an ex major in the Long Range Desert Group who recognised the benefits of an engineer knowing something about the land and those with knowledge of the land, knowing something about engineering. "In a large way he was responsible for persuading Lincoln College to set up the Bachelor of Agricultural Engineering course that got off the ground in the late 60's."

Dex already fitted that mould; his hands on experiences in those early years had taken his knowledge far beyond the Certificate in Soil Conservation he had earned extramurally from Lincoln College. "There were three divisions in the catchment boards, administration, engineering and Soil conservation I've always been a bit of a hybrid and had a go at all of them."

A move to the Waikato Valley Authority introduced him to a different soil type on the pumice lands of the Upper Waikato Catchment and the need to design soil conservation programmes and mechanisms to counter the massive erosion on land development blocks. "We were dealing with Lands and Survey and Maori Affairs trying to get them to practice the right methods - and with the settlers who were generally under pretty strict budget controls." The methods learned on other soil types did not always work on pumice and there was often a need to invent new techniques as they went along.

He was still working on pumice land when he moved on two years later to work for the Bay of Plenty Catchment Commission. His biggest project there a catchment management plan for the Kaituna catchment which includes Lake Rotorua. "The main purpose of that plan was to reduce the enrichment of the lake by stopping runoff from agricultural land." Across the divide, in the Bay proper, there were the familiar problems of soil loss and hillside slippage. Problems that surfaced again when the township of Matata flooded last year. "Matata - I've been up that same bloody gully - it was a problem waiting to happen

that got worse over time, with people insisting on building on a river fan." Blocked culverts under the railway line didn't help either.

Nelson 1969 and an appointment as chief soil conservator, a position that grew five years later into the catchment board's operations manager and deputy director, responsible for almost 100 staff. Nelson threw up another challenge, a big thrust into forestry in the region necessitating the development of farm plans and catchment controls for forestry operations. Working to develop a pilot scheme for soil and water conservation in forests, he visited North America on a four month study tour. "It was exhausting, I covered 26 states and the longest I slept in one bed was three nights." But he came back with a wealth of new found knowledge, which over time he sifted out into practical application. Like a soil type in Idaho that exhibited the same dissolving characteristics as those in Golden Bay and how it could be handled and the use of total suspension systems in logging operations. That was newcomer to the forestry industry: The concept of lifting the logs from where they had fallen and transporting them by aerial cableway to a collection point was progressive, both in on site efficiency and in soil conservation.

Closer to the coast he tackled the long-standing problems of soil compaction and surface cultivation of the then extensive apple orchards, developing techniques for orchard grassing and contour planting to reduce surface erosion and subsoil ripping to offset the influences of soil compaction on healthy growth.

A rising star, his next move was to the Ministry of Works and Development in Wellington in 1979 as planning manager. It was a move that landed him in the middle of "Think Big" and in a position where he would have dealings with an acerbic Rob Muldoon and his first real contact with the landscape of Taranaki. " Don't get me wrong I had had dealings with Taranaki before - Pam comes from Opunake and we were married there, but this was different, the ring plain study we did of Taranaki then was the first ever resource evaluation of the province." It was also his first occasion to deal with Basil Chamberlain, then an officer with the Taranaki Catchment Board, now chief executive of the Taranaki Regional Council. The Ministry was Think Big and think tanks, legislation directed and, one gets the impression, a little restrictive to a conservator with his own ideas and the ability to think outside the square.

A move to the National Water and Soil Conservation Association as secretary / chief executive in 1984 was less restrictive and brought him closer to the roots of his career, "We were actively involved in beating up previous policies, looking at new ways and changing policies and methods that hadn't moved to keep up with the times, or didn't recognise the differences that could occur between regions." NWSCA also championed the Wild and Scenic Rivers campaign, Taranaki's Stony River one of the first to be registered. Boardroom and bureaucratic battles also stopped the building of five hydro dams on the Motu River and involved the NWSCA- and Dex in the conflict between potential irrigators and river users on the Rakaia.

Rogernomics and rationalisation shut the door on both the MWD and NWSCA in 1988. "It was a Christmas present, to come in to work and learn that we had been chucked on the scrap heap. Not everyone could handle it, a lot of people I knew ended up in the hands of the breweries or the medical profession."

20,000 lost their jobs in that rationalisation and Dex still considers he was lucky to score a job with the State Services Commission. It wasn't always the best job, being largely to do with the disposal of the various assets of the MWD that were surplus to its requirements as one of the new State Owned Enterprises. "It was a tremendous experience clearing up the debris, but there was a lot of what was best in New Zealand, the people and the skills that were lost then and have never been replaced."

The flood that threatened Waitara on Taranaki Anniversary Day in 1990 was like an adrenaline boost to a middle aged soil conservator. "Basil asked me to give a hand and I rounded up a team and did a crash damage assessment which went as a report to central Government and became the basis of a relief package." The \$2.8million Waitara project and the protracted negotiations with Transit NZ, "to get them to put their hands in their pockets and contribute" brought him permanently to Taranaki. Not immediately: For a year he made the weekly commute between Wellington and Stratford as the last of his children finished secondary school and the market value of their Wellington home fortunately lurched back to where it had been before the 1987 crash.

He has been resident for 15 years now, gradually accumulating responsibility, taking on, as he sees it, the jobs that no one else wants or that central government continues to devolve - like land transport and health and safety. In 1992 he was involved with the urban transport issue in New Plymouth when the city opted out of a business that was generating a \$1.7 million annual loss and the business became a commercial operation. Within the last few months he has worked to promote a pilot scheme that will again see subsidised public transport on city streets.

But despite the buses and the other roles he has taken as the operations manager at the Taranaki Regional Council, deep down he is still a soil conservator. The clean up and conservation projects that followed the Waitotara flood are testament to that. Ignoring the kites and hypothesis flown by the less experienced, he set out to tackle the root causes, river bed congestion and unrestrained willow growth. He talks enthusiastically of the next stages and the merits of the methods used to date.

He brings the same enthusiasm to a discussion on the success of the region wide riparian planting scheme, agro forestry, tree trusts and wetland protection. Ask about plant species used in conservation and he will reminisce about the time when crack willow and Lombardy poplar ruled, Booth willow, selected in the Wairarapa almost half a century ago as a superior strain, and the introduction of the American serotina and robusta poplars.

Take a moment and he will talk about the importance of pest control in maintaining the vegetative cover essential to the stability of hill and streamside and the rehabilitation of native flora and fauna.

He will acknowledge the ongoing need for innovation, to counter the willow saw fly perhaps, or to meet ever more demanding standards in water quality - and the scarcity of young blood coming into his profession to lead it.

Give him time and he might branch out and talk about some of the thousands of people and hundreds of "characters" he has met or worked with over the past 50 years. Talk to some of them and they will tell of his professionalism, the years of service to the NZ Association of Resource Management, of which organisation he was on the executive for 10 years, president for "a few" and was made a life member eight years ago. They will talk of the depth and breadth of his knowledge, his role as a mentor and his sheer practicality.

"Who else would have suggested Nelson could save half a million litres of water a day - just by putting a brick in every toilet cistern."

It's on going, finding the simple and practical solutions to often big problems is what keeps Dex Knowles interested - and at work

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## **Obituary: Murray Jessen, 1952-2006**

Mike Page and Hugh Wilde

Murray Jessen was tragically killed in an accident while competing in a road cycle race in Hawke's Bay on 15th January 2006. For Murray cycling was a passion, and he had recently completed his seventh Lake Taupo Cycle Challenge. His other passions were his family and his work as a soil scientist.

Murray was born in Te Aroha in 1952. He attended Taupo Nui-A-Tia College before studying at the University of Waikato, where in 1977 he gained a M.Sc. 1st Class Hons in pedology. He was one of Harry Gibbs' top students. Murray moved to Palmerston North in 1976 to join the Water and Soil Division of the Ministry of Works as a scientist. Shortly afterwards he married Colleen. Daughter Katie and son Nick soon completed the family. He was initially employed to work on the New Zealand Land Resource Inventory (NZLRI)—the nation-wide multi-factor inventory and land-use capability survey that forms New Zealand's main land-use planning tool. Murray made a major contribution to this survey, working in the Northland, Auckland, Coromandel, Waikato, Bay of Plenty, King Country, Taranaki, and Gisborne-East Coast regions.

In subsequent years he has been a great advocate of the NZLRI, employing it in numerous inventive ways for both research and consultancy.

During the 1980s Murray pioneered and widely applied a land resource survey system for evaluating land capability for urban and peri-urban development, and wrote a handbook on survey methodology. He carried out surveys in west Auckland, Waiheke Island, Palmerston North, and provided advice for many other urban studies throughout New Zealand. He also provided land resource data for the Upper Waitemata Harbour Catchment study. This data was a major component of the Land and Water Management Plan that set guidelines and policies for the future growth of Auckland.

With the onset of the Government restructuring of science, driven by Rogernomics and a “user-pays” philosophy, Water and Soil Division was transferred to DSIR in 1988 and amalgamated with the Soil Bureau. This began a period of international consultancies for Murray, focussing on watershed management. First was a land use capability survey and training project in the Cook Islands in 1990 to identify sustainable land use and crop suitability on the islands of Rarotonga and Atiu.

In 1991, he was stationed for sixteen months in Indonesia as a consultant for a land resource mapping project in Solo, Java. He co-organised and conducted land resource and land classification surveys for soil conservation and watershed planning, and ran a series of associated training courses for Indonesian Ministry of Forestry staff. Colleen, Katie and Nick accompanied him on this visit, and despite the renowned problems of working in such environments, this was a rewarding time professionally and for the family.

Other international consultancies where Murray played a leading role were: a pre-project feasibility mission in Guizhou Province, China for FAO in 1994 to improve design of soil conservation and re-forestation strategies; and in 1995-96 developing an integrated watershed management plan for the Noelmina catchment, West Timor.

With the formation of Crown Research Institutes in 1992, Murray and his colleagues were transferred to Landcare Research on the Massey University campus, and his subsequent career has taken several paths. Initially Murray was involved in erosion risk assessment for urban development, and later sediment source investigations and watershed sediment budgets. Nearly ten years later, this work led to Murray’s involvement in the Erosion Carbon programme. Around this time the NZLRI work was slowly evolving into more soils-oriented work, although more NZLRI work was to come. Between 1994 and 2000 Murray was working on methods and guidelines for sustainable land-use mapping and monitoring for several client organizations, as well as leading a regional land resource upgrade for the Gisborne-East Coast region. He also worked on modelling of sediment generation by landslides. About this time Murray further developed his interest in soils work, firstly helping with the definition and distribution of high-class soils in NZ, with colleagues, and later by investigating new ways of representing fundamental soil data for the Waikato Region.

After 2002, Murray’s soils work began to take precedence over other kinds of land resource work. His infectious enthusiasm for soils was boundless. Murray helped with the development of

a soil parent material layer for the Land Environments of New Zealand (LENZ) project, and went on to map soils in urban and peri-urban catchments near Auckland. Filling North Island data gaps in the National Soils Database came later, with work characterising the profile features and the physical and chemical properties of soils that we knew little about and which were unrepresented in the national database. Matching crops to climates and soils, carried out jointly with other CRIs for local authorities, became an extension of his earlier work on sustainable land-use planning and definition of high-class soils. National consultancies during this period were undertaken for Taranaki Regional Council, Tauranga District Council, and in the far north.

Larger soils-based projects followed, with the Erosion Carbon project that accounted for carbon losses from NZ's erosion processes, and the Soils Underpinning Business Success (SUBS) project including work with the McRae Trust in Northern Hawkes Bay. The SUBS work with AgResearch and Wrightson Solutions staff and with farm study groups located between Ruatoria and the Wairarapa. This helped farm managers, farmers and landowners prepare soil maps and land-management unit maps of their properties that would allow them to match their business operations to the physical and chemical attributes of the land, and thus reduce environmental effects of farming and improve net returns.

Murray was involved in field days throughout New Zealand, showing farmers, Regional Council staff, and scientists the merits of the Visual Soil Assessment (VSA) system. The system provides a quick, repeatable, and inexpensive way of assessing the condition of soils. Murray's skill in communicating scientific information and the natural rapport he had with farmers played a significant part in the success of these field days.

S-map, within the Spatial Information programme, was one of Murray's most recent projects. Field work was a particular pleasure for Murray when he could escape his Team Leader duties (because recently Murray became leader for a team of 24 scientists and technicians). Here was a mapping project combined with collection of mainly physical data, and for practical purposes. S-map carried out at large (e.g. farm scale) can emulate what the SUBS project does for land owners and farmers. In contrast, S-map carried out at smaller scales will eventually replace many aspects of the NZLRI.

Murray loved his sport, and for him participation was vital. Over the years he took up squash, road running, and swimming, all of which he did with the passion and enthusiasm that everyone who knew Murray will recognise. He even tried golf, but it proved too frustrating for him. He finally found road cycling, a sport he excelled at. He spent Sunday mornings on club rides around the Manawatu, competed in numerous cycle races including the Lake Taupo Challenge, and was proud that he was continually doing personal best times.

Everybody who knew Murray will be deeply saddened by his death. Everybody loved his humorous take on life, and everybody has a story to relate about him that usually involved his forgetfulness, his latest sports injury, or that wonderful sense of humour. To Murray's family, and to his friends outside Landcare Research, we all extend our deepest sympathy.

Murray you made a difference. We will miss you.

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## **Hot topic: Land stability reports for subdivision and building consents**

Peter Fantham

Outside of, and as well as, the traditional Regional Council --- Soil Conservation----Farmer advocacy----Revegetation roll, we in Gisborne are a District as well as a Regional Council !!!!!!!!!!! . We get involved in some really interesting Urban land stability issues.

The 'Soil Conservators' here in Gisborne are heavily involved in land stability vetting of geotechnical reports for subdivisions and building consents. This involves making professional comments to planning staff regarding resource consent conditions that must be / should be put on the land title as 'consent notices' after subdivision is approved.

We work in closely with Professional independent peer reviewers, usually Geotechnical Engineers or Engineering Geologists, who always have many years of experience in Urban land stability issues and often in EQC claims.

It is all about 'risk management' associated with natural or man made hazards as well as 'liability minimisation' for our communities ( ie us all as rate payers) in the future.

The push is on to use / develop land that is often in the 'marginal stability category' or sub marginal ( re structures ), which have coastal views. NOTE: All the easy development areas have already gone.

These new development areas are mainly around Gisborne city and environs and the whole process involves MEGA BUCKS in developers resources and obviously in prices being asked of the future Purchaser . Potential liabilities to rates pays are substantial i.e. also MEGA BUCKS if the wrong calls are made.

Some important matters involving 'professional reports' submitted and then often referred to independent peer review have arisen in the last 4 years. This has been subject to high level 'legal opinion'.

The issues are associated with accepting 'professional reports' where the professional ( surveyor, geotechnical engineer, engineering geologist, design engineer , land stability expert.....' are in reality acting for their client 'THE DEVELOPER'.

This has been the subject of much debate in Gisborne and this debate is on going . It got to the point where over arching Council staff report was submitted to Council in December 2005 .

The report was under the signature of Department Manager and the Division heads of Conservation ( Soil , water , and Plant and animal pests), Planning, and Building. It was circulated prior to the Council meeting to professional parties including large National and International firms who GEC have been using for professional peer review, as well as all the regular professional parties supplying reports for Subdivision and Building consent in Gisborne.

Feed back was positive and was requested prior to the Council meeting. Some minor changes made to the report were made, hence version 2.

It has been even more widely circulated to District Council's of a similar size to Gisborne and to parties like solicitors requesting LIM reports in Gisborne as well as other interested parties.

It also make sense to circulate the report to NZARM members, especially to those who are involved with the RMA consent processes or who are involved in subdivision / land stability.

Again: This is all about sensible risk management for our communities.

As you appear to be/ may be short of press, attached is a PDF copy of the report GDC 2005/ 614 version 2. Please feel free to include it in its entirety. If there is no room I can send it by e-mail to people who request it. Please email peterf@gdc.govt.nz

Comments form NZARM members would be interesting.

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## **Article: A brief history of water management in New Zealand**

Dex Knowles

### **Introduction**

In the beginning water management in New Zealand was limited to either exploitive use or manipulation for drainage and flood protection purposes. Exploitive use included the taking of water for water supply purposes, irrigation or using water as a mixing zone and discharging effluent and wastes. In the latter case, extensive use of coastal waters was made for the discharge of urban sewage and industrial waste streams. Major uses of water resources, eg mining, industry, hydro electric development, irrigation, etc were supported by Government through Orders in Council or other empowering legislation. It was not until about the 1950's that legislation was introduced that provided the opportunity for the management of water quality. In the late 1960's ground breaking legislation saw sweeping changes leading to comprehensive water management in terms of pollution control and water allocation through the virtual "nationalisation" of all forms of water and the introduction of water rights. These latter concepts have been carried through and incorporated into the Resource Management Act 1991.

### **Water quality**

Early water management activities were use-driven for consumptive purposes, the production of energy and disposal of wastes. Consumptive use was the first to have regulatory control of water quality standards relating to human health. On the other hand, legislation enabled mining privileges to exploit water by using it for sluicing and the transport of wastes and designated sludge channels.

### **Hydro electricity**

The use of water for hydro electricity generation was recognised early in New Zealand's history and the extensive network of generation stations which now exist throughout the country have come about through a suite of empowering legislation and Orders in Council which generally ensured that developers had a fairly open hand in using the water resource to their best advantage.

### **Drainage**

Many of the alluvial flood plains throughout the country suffered from an over-abundance of water through surface flooding and high water tables. Prior to 1900 localised river boards and land drainage boards were established to enable river and flood control and drainage works to be undertaken in some form of organised manner. Unfortunately, there were numerous cases where different river boards operated on both sides of the river and each directed their efforts at transferring their problems to their neighbours. Some larger land drainage projects were undertaken for the Crown by the Lands Department, who later handed the drainage schemes over to local drainage boards. As an aside, it is interesting to note that the Land Drainage Act 1908 remains operative today and in fact remains to be a very useful tool to overcome deficiencies in current statutes.

### **Irrigation**

Drier parts of the country took the opportunity to level out the seasonal affects of rainfall by the introduction of Crown-promoted irrigation schemes. These were generally enabled by Government until the water management legislation of the late 1960's was enacted. Private irrigation schemes, always on a much smaller scale, were also constructed.

### **Flood control**

Colonisation of New Zealand was strongly influenced by the presence of rivers either as a means of transportation or water supply adjacent to fertile flood plains. It followed that such areas became favoured for the development of urban settlements and higher density landholdings. As further development of the hinterland occurred, it became apparent in a short period of time that alluvial flood plains were generally subject to periodic flooding. Initially, ad hoc flood protection measures were put in place until more formal schemes were developed by river boards. By 1940 key vulnerable areas had some form of flood protection. The introduction of the Soil Conservation and Rivers Control Act 1941, led to the establishment of catchment authorities which had specific functions of soil conservation, river and flood control. These activities contained elements of water management in that erosion control reduced suspended sediments in watercourses while river control, flood control and land drainage influenced aquatic habitat.

### **Pollution**

By 1953 sufficient public interest had been expressed about increasing water pollution that Government introduced the Water Pollution Act which was jointly administered by the Health and Marine Departments and overseen by an appointed Water Pollution Advisory Council. In simple terms the function of the Council was to issue permits to allow conditional controlled discharge of pollutants from major installations into rivers and the sea. Included within this legislation was a provision which enabled the establishment of underground water authorities, whose function was to manage the use of underground water in defined localities. An example

was the Heretaunga Plains Underground Water Authority, which was managed by the Hawkes Bay Catchment Board.

Progress with control of water pollution, public acceptance of the need for that control and the protection of inland and coastal waters, led to the introduction of the Water Pollution Regulations in 1963. These regulations introduced water classification which set standards of water quality in designated areas and effectively controlled the level of contamination which was allowed to occur within such areas. Water classification was used in many localities until it was revoked in 1971.

### **Regulation**

The Water and Soil Conservation Act 1967 was ground breaking legislation, bringing water management in New Zealand through to possibly the highest of international standards. The statute effectively nationalised natural water (of all forms) and required users to obtain water rights for taking, discharging into, damming and diverting “natural water”. Regional Water Boards, largely based on existing catchment authority boundaries, were mandatorily established throughout the country. The National Water and Soil Conservation Authority (NWASCA) was created and directed the activities of the regional water boards and catchment authorities. For water management purposes two new councils were appointed following the abolition of the Water Pollution Act, the associated Pollution Advisory Council and underground water authorities. These were the Water Pollution Control Council and the Water Allocation Council and they joined with the Soil Conservation and Rivers Control Council to form the National Water and Soil Conservation Organisation (NWASCO).

Water rights associated with Mining Privileges through the Mining Act were revoked in 1971.

### **Progress**

The protection of water bodies for purposes other than pollution control was promoted over a period of years primarily by recreational organisations. By 1971 sufficient public support had been generated to see Government introduce additional protection measures to the Water and Soil Conservation Act 1967. Provisions within the 1971 amendments included the abolition of the Water Pollution Control Council and the Water Allocation Council and they were replaced by a single Water Resources Council.

In 1981 the “Wild and Scenic Rivers” protection provisions were introduced by further amendment to the principal Act. The primary mechanisms revolved around a public hearing process following an application made by a recognised organisation for the protection of a specified water body or part thereof to a particular standard. There were two levels of protection, one being through a National Water Conservation Order and a lower level of protection through a Local Water Conservation Notice. A number of applications for these protection mechanisms were lodged which led to a series of lengthy hearings followed by appeals dealt with by the Planning Tribunal.

During the mid to late 1970’s NWASCA promoted long-term resource planning to catchment authorities/regional water boards. This was initially labeled “Water and Soil Regional Management Planning” (WASRMP) but as a result of local government protest it was changed to “Water and Soil Resource Management Planning” (WASRMP). The concept involved the

identification of resources and the setting of management objectives. It was heavily supported by Government funding programmes to facilitate resource investigations and planning activities.

1988 saw substantial amendments made to the Water and Soil Conservation Act, which included the abolition of NWASCA and a transfer of additional functions to regional water boards/catchment authorities.

In 1989 further changes were introduced through Local Government reorganisation, which led to the establishment of regional councils who in turn took on the duties and functions previously undertaken by regional water boards/catchment authorities.

The Resource Management Act was introduced in 1991 and this abolished the Water and Soil Conservation Act and the Town and Country Planning Act and substantially amended the Soil Conservation and Rivers Control Act. Regional councils became consent authorities for resource use and management and the promotion of sustainable use of natural resources by establishing policies through regional resource planning mechanisms.

It is interesting to observe that some 15 years after the initial promotion of “Resource Management Planning” by NWASCA it was enshrined into statute in a way which saw operational management substituted by regulatory control.

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## **Regional Report: Land Managers’ Meeting April 2006**

Bruce Peplow

Among the business as usual activities (maintaining catchment schemes and promoting new soil conservation projects throughout the region) we have been working on a number of key projects with the intention that these be incorporated into Environment Waikato’s 2006 -2016 LTCCP. I will outline one of these projects as follows.

### **Sustainable Agriculture and Integrated Catchment Management**

There is the growing realization within the Waikato region that much of our present farming practices are unsustainable. What do we know?

- 25% of the workforce is employed in the agriculture sector
- Agriculture contributes \$2.5 billion to the regional economy
- Nitrogen in rural waters is increasing by 2.5% per annum
- Nitrogen fertilizer use has increased by 600% in the last 13 years
- Number of dairy cows has increased by more than 100,000 in last 10 years
- 16% of our ground water sites exceed drinking water standards
- Dramatic increase in subdivision of land in key locations (Lake Taupo, coastal sites)

- Significant areas of forest (in excess of 30,000 ha) is to be converted to pastoral use, mainly dairying
- There is a high degree of non compliance with existing consents particularly dairy discharge (20% plus non compliance)
- Continuing decline in water quality can be expected as a result of current land use.

Environment Waikato has been looking at ways in which we can respond to these regional trends. An initial step was to propose a Variation to the Waikato Regional Plan for the Lake Taupo catchment that would set limits on N loss and control land use within the catchment. The WRP was appealed by the Ecologic Foundation who considered that the plan did not go far enough. In seeking to resolve this appeal and in response to the regional trends, EW is developing a Sustainable Agriculture Strategy. The strategy will incorporate the following:

- Review of Policy in relation to land use, nutrient management, land conversion
- Monitoring and Enforcement – review of communication with farmers as to the rules, permitted activity monitoring, information support
- Promotion of incentive schemes (Clean Streams etc.)
- Promotion of Integrated Catchment Management and Whole Farm Planning
  - Soil and water management
  - River and stream management
  - Biosecurity
  - Biodiversity
  - Key ecological sites
  - Piloting new techniques
  - Regional Plan Implementation
  - Monitoring and compliance
  - Environment education, advice, information
  - Best Management Practice
  - Water Allocation
- Research and Information, modelling, nutrient management, soil quality

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## **NZARM Trade & Exchange**

This section is proposed for the sharing, exchange or purchase of resource management related items. I have a couple of items of interest to me, so I thought I'd see how it goes. If there's a good response then there might be an opportunity for setting up some sort of exchange & sharing system. Too many of these resources are just gradually lost and (some) can never be replaced.

- LUC Bulletins & soil maps/reports: There must be hundreds of these things out there that are no longer used. If you have any you don't want, please get in touch with the editor.
  - Copy of the draft Waikato LUC Bulletin: Apparently an LUC Bulletin was actually produced for the Waikato to draft stage. Then NWASCO was dissolved and it was never finished. Any information about, or copies of, would be greatly appreciated.
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## Training notice: Resource management negotiation training

(Submitted by Chris Phillips)

### RESOURCE MANAGEMENT NEGOTIATION TRAINING

CHRISTCHURCH May 2006

Updated version of  
tried & true courses

**Where: The Arts Centre of Christchurch**

<p align="center"><b>NEGOTIATING RESOURCE MANAGEMENT AGREEMENTS</b></p> <p align="center"><b>Thursday 18 May 9 – 4.45 pm</b></p>	<p align="center"><b>NEGOTIATING AGREEMENTS – ADVANCED TRAINING</b></p> <p align="center"><b>Friday 19 May 9 - 4.30 pm</b></p>
<p>This course is designed for people who need to build agreements over resource management issues such as: siting of facilities, conservation, access to land, building disputes, managing waterways, changing land use practices. The day includes actively testing a range of practical approaches for application in a wide range of situations. The goal is to reduce the need for litigation.</p>	<p>The day provides opportunities to test out and develop approaches and skills to use in challenging situations. Participants work in teams to develop strategies and skills aimed at overcoming conflict in a community over a development</p> <p>It will be helpful to have completed the ‘Negotiating Resource Management Agreements’ training day.</p>
<p><b>Topics</b></p> <p><u>Valuing past negotiation experience</u> <i>Recognise what has made past negotiations successful and what has made them difficult.</i></p> <p><u>Talking like a negotiator</u> <i>Approaches negotiators use to build cooperation, participation and a sense of fairness.</i></p> <p><u>Understanding what people are telling you</u> <i>What are the messages behind people’s words? Look beyond talking, to how to really communicate. Understand how we come across to others and how to make the most of each negotiator’s contribution.</i></p> <p><u>Negotiation steps – building small agreements along the way</u> <i>Techniques to build small agreements at each negotiation step will be experienced.</i></p> <p><u>Being persuasive</u> <i>Introduction to methods that makes people really listen to you.</i></p>	<p><b>Topics</b></p> <p><u>Being persuasive</u> <i>Building a persuasive case to help you negotiate, trying out the methods and receiving individual feedback on the skills that help you have influence.</i></p> <p><u>What you can do when the going gets rough</u> <i>A range of interventions that give more choices in responding to challenging situations will be modelled and the skills practised.</i></p> <p><u>Managing a challenging case</u> <i>Working in teams to develop strategies and apply them to a case. A simulation of meetings from initial contact with people in disagreement through to negotiating solutions gives opportunities to try out a range of skills.</i></p> <p><u>Open session</u> <i>An opportunity for participants to work through issues prompted by the training. How to apply the techniques back at work.</i></p>
<p><b>See overleaf for the registration form</b></p>	<p>Maximum of 16 people attending at either day.</p>

*The trainer, Gay Pavelka, has worked with councils, government departments and community organisations involved in resource management since 1990. She is experienced in mediation and in facilitating community discussions aimed at gaining agreement on public issues. The course uses approaches that have proven to be effective in New Zealand.*

**CONTACT:** Gay Pavelka, Mediator/ Facilitator/Trainer, Gebbies Valley, RD2, Christchurch  
Ph (03) 3297 847, Fax (03) 3297 947, pavelka@xtra.co.nz

## Fair dinkum

Soil conservation and resource management in New Zealand is, and has been, full of interesting characters. I've heard a few stories about past RM goings on, but I've never been able to confirm them (so I won't repeat them here). But if you have any interesting stories or anecdotes, please send them in so they can be published in Broadsheet. The following was submitted by Bob Cathcart.

*“While on the matter of LRI/LUC surveyors, one should check the original versions of the Northland Worksheets. It is quite apparent that the officer responsible for field mapping in what is now the Far North District was biased in favour of coastal views. The units around the coast were of respectable dimensions but became progressively larger the further you travelled away from the surf beaches. The said Chinese surfer/cycle shop owner's inland work had to be redone at a later date by Garth Harmsworth to ensure some sort of consistency across the country.”*

## Photo of the month

Wanted. Interesting or amusing photos of NZ resource management and/or NZARM members. For the photo below, insert your own caption. Send it to the editor, and I'll try and get the exec to pick the most funny one. I'll even try to get exec to stump up with some sort of prize. Results in the next Broadsheet.



Your caption \_\_\_\_\_