



Western Bay of Plenty Catchment Management

Robyn Skelton outlines a shift to an Integrated Catchment Management approach, involving landowners and community groups, to help manage sedimentation in Tauranga Harbour.

Introduction

The Tauranga Harbour is a significant cultural, social, ecological and economic asset to the western region of the Bay of Plenty. There are 17 sub-catchments that feed into the harbour from the Kaimai Mamaku Ranges. The Tauranga Harbour Integrated Management Strategy (2006) identified sedimentation from these catchments to the harbour as the largest environmental management issue for the western region.

In response to this strategy, Council undertook to provide a three-year sediment study of the Tauranga Harbour and its sub-catchments. The results of this study, conducted by the National Institute of Water and Atmospheric Research (NIWA) will guide land management policy and decision-making for the western region. The study is expected to be completed before December 2009.

The western Bay of Plenty community concerns for the western region are consistent with the environmental issues outlined in the Tauranga Harbour Integrated Management Strategy (2006). The community are concerned with harbour sedimentation, the loss of seafood and recreational access, flooding, erosion of stream banks and hillsides, loss of ecological habitats and poor water quality. They are also concerned with the growth of mangroves on the harbour margins.

This report briefly summarises the past approach to land management and outlines the catchment management approach currently being developed for the western region.

Past Approach to Land Management

The western region's approach to land management has to date been subsidy-assisted; driven primarily by willing landowners and community care groups. The land management activities have mainly focused on riparian management, including planting and fencing through Environment Bay of Plenty Environmental Programmes and care group efforts. They have been occurring on a landowner/community-driven, ad hoc basis.

While this has been successful in addressing specific sediment sources where landowners were willing, this has not provided an effective means of addressing sediment issues catchment wide.

New Catchment Management Approach

The new catchment management approach will include stream management, sediment control and biodiversity protection across the sub-catchments. Implementation will still be voluntary but it will draw on the local community to provide the impetus and encouragement for action by landowners.

Environment Bay of Plenty staff are currently developing a simple catchment plan template that can be applied ultimately to any catchment. This will set out the sustainable land management (SLM) objectives for the catchment, the key issues including significant sediment source areas, and



Robyn Skelton, with Andrew Baucke (DoC), John Simmons (Environment Waikato) and community members briefing the Minister of Conservation Tim Groser and MP Simon Bridges (photo Katrina Knill DoC)

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NZARM

The New Zealand Association of Resource Management (NZARM) is an incorporated society that provides support and focus for people who share a professional interest in the sustainable management of New Zealand's natural resources.

NZARM's purpose is to champion the resource management cause, to promote professionalism, and to maintain a strong community spirit of meeting, sharing, and generally having a good time. Members receive benefit through an annual conference, regional workshops, a Broadsheet newsletter three times each year, and the opportunity to become a recognised professional and accredited practitioner of resource management.

Further information, including membership registration details, can be obtained from the NZARM website (www.nzarm.org.nz) or by contacting the secretary:

The Secretary
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BROADSHEET

BROADSHEET is the newsletter of the New Zealand Association of Resource Management. It is now published three times per year.

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. An invitation to make submissions to Broadsheet is sent out 2 - 4 weeks prior to the publication date. However, SUBMISSIONS CAN BE MADE TO THE EDITOR AT ANY TIME. Generally submissions are sent to NZARM regional coordinators or directly to the Editor. Copy sent by E-mail is preferred, although typed copy is also acceptable. Items can be sent to:

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Editor's note

This Broadsheet has appeared to have a unintended community engagement theme to it, which started me thinking.....

Salutations NZARM'ers.

Firstly, thank you to all contributors for this issue of the Broadsheet, great to have a surfeit of material to work with. And also a reminder about this years NZARM conference, which will be held in Waitangi from November 3-5.

As you will note, through no fault of my own, a good proportion of the articles in this issue of the Broadsheet are focused on community engagement coupled with catchment management. This has led me to think about the role communities play in the work we do and indeed, the relationships that allow projects to either succeed or fail.

Upon thinking about it, the path to any successful community based project is by and large all about relationships, whether that be standing on a crumbling hillside with a farmer or integrating history, hunting and art as you'll read about in the neighbouring article. Furthermore, working with community groups can be a dire experience unless the community actually buys in to what you are setting out to achieve. In that light, the dairy community-led Aorere Catchment Project (see Page 6) strikes me as a great example of a community taking responsibility.

Its hard not to think that perhaps there is a lesson to be learnt for our regulatory framework in what can be achieved when a hand is held out instead of a stick (without wanting to sound to Obama-esque). To help

my point, a farmer I work with was recently explaining, in a moment of reverie, how the soil conservator was traditionally as part of the farming business as the accountant, the stock agent and the fertiliser representative. Although this is not always the case, in many circumstances it is and, in the majority, the role is still integral on erodible hill country farms. My point being is they would be unlikely to say that about their local council regulator.

Occasionally our team at the Regional Council is jestingly referred to as the tea and scones department. A swipe generally from our colleagues in the consents department who have some envy of the degree in which we are able to work and achieve our objectives through partnerships and incentives as opposed to regulation. But then, maybe that is the key. Wouldn't this be a much better model for dealing with many of our environmental and agricultural woes, namely fencing off of waterways, discharge of effluent, groundwater and surface water takes for irrigation, nutrient runoff to waterways; the list could go on. If a hill country farmer can be convinced to plant poplars and willows to increase land stability and productivity through incentives as opposed to regulation, surely the same argument could be applied elsewhere. Regardless, if these projects give a glimpse at an integrated catchment management future, then it paints an attractive picture that New Zealand would do well to hang on its wall.

Tony Faulkner



Your intrepid editor helps shoulder the load with the community.
(photo: Lynda Feringa, Wairarapa Times Age)

Captain Cook, Flood Protection, Duck Shooters, Local School and Art Project come together on the banks of the Waihou River

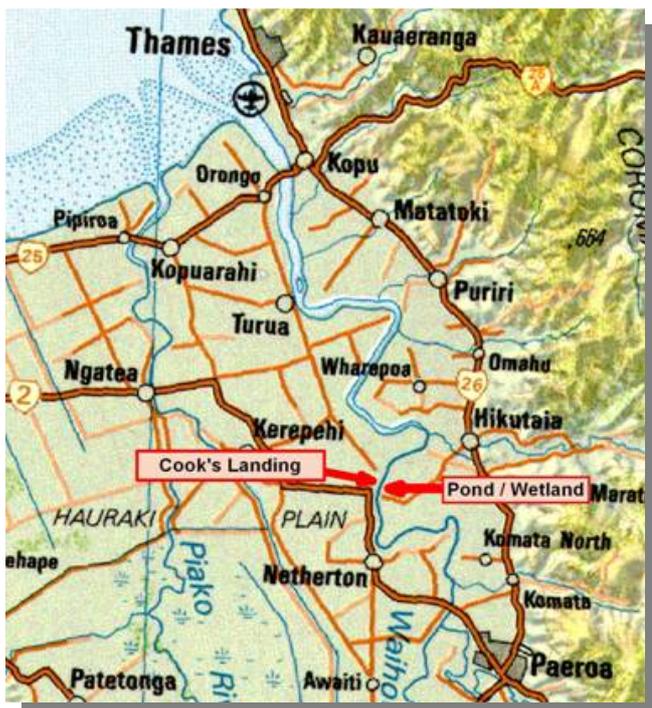
Rien van de Weteringh explains how history, art, hunters and community groups are coming together to help create a wetland and enhance biodiversity.

In a drive to bring back some of the wetlands lost in land development and flood protection works along the lower Waihou River, Environment Waikato has teamed up with community groups to create a wetland that will provide a new dimension to a landscape dominated by pasture and stop banks.

Environmental officer Michelle Hodges is leading the project as part of an overall programme to restore some biodiversity on land administered by the Waihou Valley Scheme.



A pond created by excavating clay to be used for topping up stop banks has been shaped to give it a more natural shape, deep and shallow water and also a few islands. A planting plan was drawn up and modelled to make sure it wouldn't have any significant impact on flood levels.



Waihou and Piako Scheme area engineer Kevin Campbell who is also a keen duck shooter alerted his Fish & Game buddies to an opportunity to create a "junior shooters pond" provided they could help with the planting of the area.

Fish & Game contacted nearby Hikutaia primary school to see if pupils could be involved in the planting. This was taken on with much enthusiasm and on the 3rd & 4th August

approximately 100 children helped Fish & Game members and EW staff to plant approximately 1600 native trees and shrubs.



Last year land Management Officer Rien van de Weteringh was contacted by artist Fiona Garlick who graduated at the Elam School of Arts in Auckland with a project called "Art for

Trees". Fiona's art generally connects with the environment and in this case she was inspired by Captain Cook's account of what he saw when he sailed up the Waihou River. Fiona was looking to extend her art project into a natural setting as it pays homage to what Cook saw (Kahikatea forest) that day in 1769 and to the Giant Kahikatea tree he measured not far from the spot he went ashore. This is across the river from the wetland/pond project and at the intersection of State Highway 2 and Hauraki Road where a memorial has been erected.

On the 20th November 1769 Captain Cook ventured up the Waihou River, named by him that day the Thames. His journal entry tells of "lofty trees which adorne its banks..." and a tree he measured "that girted 19 feet 8 inches 6 feet above the ground...its length from the root to the first branch to be 89 feet...as straight as an arrow..."(J.C Beaglehole, 1955).

His companion Joseph Banks described "...the finest timber my eyes ever beheldthick woods of it were everywhere upon the Banks, every tree as straight as a pine and of immense size.....

(J.C Beaglehole,1962)

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Letters to the Editor

Dear Sir,

Great to see a new recruit taking over the challenge of Broadsheet Editor. Go for it Tony! Stumbled back into the profession last month to attend the LUC handbook relaunch in Northland. Bob "Crusty" Cathcart was going to be in Aussie so invited me along to "keep Eyles honest" at the workshop. Out of Northland for 20 years and soil con for 10 I was very rusty at the start of the day but as things progressed all those northland soil types, LUC info and soil conservation measures came flooding back. By the end of the field trip Garth had trouble shutting me up! Once a soil conservator always a soil conservator I guess! I want to make a plug for Garth Eyles' uncanny ability to explain the science of LUC in plain language so that everyone from boffins to cockies can understand,

even myself! It was a great day making me nostalgic for my old profession. I'm sure Bob will carry on with the LUC resurgence up north. Congratulations to Dave Cameron on his honorary membership. See you in the Bay of Islands. This year's conference should rival the "three Bob Job" regional meeting we put on for Bob's Cathcart the late Bob Priest and Bob (Tony can't remember surname of ex chief soil con Poverty Bay) hosted at his motel in the Bay. Dex Knowles surpassed himself by flying up from New Plymouth at his own expense then a rental car on from there!

Cheers, **Lee Whiley**, alias Lee Wha Lee. Lee can be contacted at the Chinese Embassy or dodgylee@planetcycles.co.nz

Retro Ruminations

Graeme Anderson harks back to the early days of Otago soil conservation, metrication and duty free shopping.

Heartiest congratulations to Garth Eyles and the team producing the third edition of the LUC survey handbook. LUC survey has come along way since the first handbook was published 40 years ago. The spring back binding and the quality of the cover and pages should withstand the handling field books receive. The photographic reproduction is excellent, even I can translate and absorb most of them.

It was coincidental that Ian Cairns contribution on the Taupo Reunion also appeared in the Broadsheet! He summed up the situation when he said "Soil conservation in the early days concentrated on doing things in the country. That's where the problems were".

I note the change in LUC class numbering from Roman to Arabic and whole heartedly agree. The reason for adopting Roman initially was that the only direction to follow was set down in the US Conservation Service whose texts of the time were the only ones to follow, as did our contemporaries in Australia. The system was adjusted and adapted to NZ requirements over time.

Otago soil conservation staff gained the experience of Allan Greenall's appointment as Chief Soil Conservator. Allan led a team on a benchmark survey of the Pohangina Catchment in 1951. Initially we were dependant on whatever aerial mapping photos were available and inch to the mile contour ordinance maps. Parts of Central Otago were covered by soil maps surveyed by John McCraw (later Professor of Earth Science, Waikato University) and Mike Leamy (later Chief Soil Bureau D.S.I.R) stationed at Alexandria at various times. Field equipment varied. The top guns procured hand calculators (Hewlett/Packard of course). The lesser ranks made do with logarithmic tables and slide rules.

On the modest salaries of the 1950s/60s any thought of O.E. went no further than Australia. This gave the chance of cutting loose, as finance ran, in the duty free store. A 35mm camera, a good supply of Kodachrome

film (about to fade into history) and perhaps binoculars. The possession of colour slides was necessary to prove your employing authority that you had penetrated further inland than Kings Cross or the Melbourne Cricket Ground, as well as captivating family and other unsuspecting guests as you operated the projector by hand.

The days of laptops and power were some time ahead. As also cellphones which enabled total concentration on field work without administrative or domestic personal distractions.

Surveying and farm planning were marching along at a great rate when a massive change of step was ordered in 1973 with the introduction of metrication. Fortunately MAF had produced a handy conversion book which was rarely far from one's right hand.

It was challenging to convince a landowner we were not talking inches, feet, yards, perches, poles, acres or talking to a contractor that feet, yards, chains were history. Particularly when they could be 15-20 years older than yourself. Wholesale redraughting of maps and reviewing work contracts was undertaken. However we survived and moved on into the 21st century albeit with changed organisations, titles and job descriptions.

Best wishes for the 2009 conference at Waitangi. Perhaps Bob Catchart might obtain some advice to his problems with the Far North's verdant vegetation.

Graeme Anderson

Captain Cook cont.

Continued from page 3.....

Fiona has made a forest of 400 ceramic bottles representing some of the native trees and shrubs which once adorned the banks of the Waihou, and which have been displaced by the introduced species associated with farming. For every bottle sold, a tree has been planted near the pond across the river from Cook's Landing site. A group of 27 people, friends and those who bought a ceramic bottle came together for a planting day on 25 July when close to 400 native seedlings were planted with the main species Kahikatea. See also Fiona's blog site <http://artfortrees.blogspot.com/>

Fiona is also keen to promote further development of Cook's landing site and negotiations are progressing with Hauraki District to tidy up the site and look at further expansion and information boards. A few memorial trees are also planned to give a visual connection with the wetland project across the river.



Rien van de Weteringh

Land Management officer
Waihou & Piako Catchments

Western Bay of Plenty cont.

Continued from front page....

actions that will need to be taken to address the issues. It will also identify the various stakeholders and funding partners that will be involved in the implementation of the plans and will ensure their respective inputs are integrated.

It is proposed that Environment Bay of Plenty will use existing policy tools to encourage landowner involvement and action to address identified SLM issues on their land. These will include the Riparian Protection and Stream Care programmes.

Supporting this catchment approach is a joint-agency communication forum. This forum involves the Department of Conservation, Environment Waikato and Environment Bay of Plenty. The aim is to promote communication for catchment management planning. It is called the Kaimai Catchments Project, but in itself is not a separate project. The forum ensures that connections are made between the agencies and allows Environment Bay of Plenty's work in the western Bay of Plenty to fit within the wider Central North Island environmental planning context. The forum also supports the Department of Conservation's mandate

to protect and enhance the Kaimai Mamaku Ranges at the top of the 17 sub-catchments.

The three agencies have recently supported a NZ Landcare Trust Sustainable Management Fund application for a Bay of Plenty Regional Coordinator. This application has been successful. The Trust plans to have a Tauranga-based coordinator working in the western Bay of Plenty by October 2009. The coordinator will be available four days a week to facilitate the establishment of community groups within the catchments. The Land Resources Manager (Western) will work alongside the NZ Landcare Trust CEO to link the coordinator's work with priority Tauranga Harbour catchments and communities.

This new direction in the western Bay of Plenty is an exciting opportunity for a ground-up approach. It will use new/revamped Council policy tools that will hopefully attract landowner and community buy-in and initiative. More on this at a later date when it is up and running.

Robyn Skelton

Environment Bay of Plenty Land Resources Manager (Western)

CONFERENCE

NZARM holds an annual conference to promote new learning, information sharing, networking, and a sense of community in the field of resource management. Venues alternate between the North and South Islands, and one of NZ's 16 regional authorities will usually host the conference itself. October-November is most favoured as the time.

CALL FOR CONFERENCE PAPERS

This year's conference will be held on the 3- 5th November 2009 in Waitangi Northland. The theme is : Northland Is The Future: See It Here First.

MEMBERSHIP

NZARM welcomes new members, particularly if you have an interest in sustainable resource management. Prospective members can apply anytime, by obtaining a registration form from the website (www.nzarm.org.nz) or from the NZARM secretary. Candidates are nominated by two existing members (contact the secretary if this would be a constraint).

Annual subscription is discounted to \$50 if paid before 31 March each year. Late payments after that date are charged at the full subscription cost of \$70. All subscription enquiries to...

The Secretary
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As a member of a registered association, members must inform the secretary in writing when they cancel or let their membership lapse. Otherwise the member will continue to be billed for the annual subscription.

PROFESSIONAL ACCREDITATION

The system that NZARM uses for professional accreditation is currently being reviewed.

MEETINGS

Regional meetings are key elements of NZARM's mission and service to its members. These meetings are usually designed around a particular regional issue and tend to involve members and interested people from both within, and from adjacent regions.

NZARM supports such events by providing financial support via seed money. Applications can be made to the National Regional Coordinator at any time. Visit the NZARM website for more information (www.nzarm.org.nz), or contact the NZARM secretary.
www.nzarm.org.nz

EVENTS

Nothing going on that I know about.
Contact the editor if you have an event you want added

NOTE

Please note NZARM will be closing their old PO box address in Palmerston North. Please forward all correspondence to:

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The Aorere Catchment Project

A small community rising to a big challenge!

"Our story is about dairy farmers taking ownership of our environmental performance and seeing it as an integral part of the future business success, not just a compliance issue" - Dairy farmer Sue Brown.

The Catchment

The Aorere is known for its magnificent beauty: forest clad hills, lush green flats and crystal clear waters. It is a place where the community's prosperity relies on its natural resources.

Most of the Aorere catchment is covered by native vegetation. It is home to the Kahurangi National Park and the Heaphy Track. The remaining landcover is made up of 16% agriculture, 3% scrub and 1% exotic forestry. Dairying is by far the most common farming type with approximately 11,000-13,500 cows within the catchment.

Aorere lifestyles are shaped not just by the physical cover of the surrounding land. Living in the Aorere means living with water. The Aorere River can be a gentle giant, its crystal-clear waters inspiring diverse recreational use. But a rainfall of between 3.5-4.5m per annum can quickly awaken the sleeping giant. Living with rapidly rising flood waters is a reality and dairy farming within these wet conditions is challenging.

At the mouth of the River lies the 1610ha Ruataniwha Estuary. The high ecological value of this estuary sees it listed as nationally significant. The estuary and nearby bay are also home to a strong aquaculture industry turning over up to \$15M in shellfish per

The Project

Ensuring the Aorere remains a great place to live and work requires considered planning and careful management of the catchment's land and water. Meeting wider community, regulatory and industry requirements for environmental performance is a big challenge. The Aorere Catchment Project is driven by the dairying community. Rising to the challenge, local farmers have joined forces acting to reduce local water quality issues. The key success of the project is its core value of 'farmers as leaders'. Utilising the deep family links and stewardship for the area along with the collective skills and knowledge of the local farmers is a key ingredient.

The initial Sustainable Farming Fund project ran from July 2006-June 2009 and is led by the Aorere Project Management Group (a group of local dairy farmers). Funding support is provided predominantly by the Ministry of Agriculture's Sustainable Farming Fund. The project is coordinated by the NZ Landcare Trust.

The Aorere Catchment differs from most others around New Zealand in that waterway nutrient concentrations are generally not high. This is mostly due to the dilution effect of high volumes of water. However, the estuary and surrounding bay are particularly sensitive to faecal bacterial or bad bug runoff (given the importance of marine farming within the area).

Each year, shellfish up to value of \$15M are harvested by the Aorere industry. When river volumes are high, E. coli levels are also high due to pasture run-off. Shellfish are not harvested during these times to avoid bad bug contamination and illness in human consumers. High E. coli have also been detected in lower flow conditions, and over time the ability to harvest shellfish was restricted to windows as low as 30% of the year. The shellfish industry faced real threat of closure if more high results were found during low river flow conditions.

This dairy-farmer driven project develops effective solutions and one on one assistance for this high rainfall setting.

It's all been about future-proofing farming and keeping the Aorere an awesome place to live and work forever!



The Aorere Catchment Project cont.

Outcomes

Arising from a history of blame and distrust the Aorere Project aims to build relationships and positive environmental results through action. After several media articles and meetings depicting the Aorere dairy community as high level polluters, tensions were running high between regulatory authorities, the shellfish industry and local dairy farmers. There was a common misconception that the Aorere River was the most polluted waterway in NZ. The New Zealand Landcare Trust offered to help local farmers turn the situation around. Although we are only part way through the journey, we are proud of the community's willingness to get involved and make a difference.



At a recent event attracting over 70 attendees the Aorere Catchment Group hosted a celebration of water quality enhancement with wide audience representation from dairy farming, marine farming, Collingwood Area School, Golden Bay Stream care Group, Fonterra, DairyNZ, Fish and Game, Tasman District Council, and Ministry of Agriculture and Forestry. The dairy farmer-driven project has been pivotal in raising awareness of issues and improving water quality.

Collingwood marine farm harvest rates had been as low as 28% due to E. coli contamination of coastal waters. Today a harvest rate of 79% has been attained. Marine farming spokesperson, Bill Wallace said "the Aorere dairy community has certainly earned our respect."

Gretchen Robertson

NZ Landcare Trust

Aorere Project Co-ordinator

Key milestones since project inception (2006):

- Formation of a dairy community-led project management team
- Intensive modelling of nutrient and pathogen impacts from landuse and on-farm management within the catchment and the surrounding bay
- Presentation of modelling results to the Tasman District Council and local marine farmers
- Identification of the key contaminant issue within the catchment and receiving environment (pathogens)
- Interviews with 31 of 33 dairy farms within the catchment to tailor project deliverables to farmers' needs
- Community problem solving field day hosted on local farms utilising farmers as experts and scientists on tap not top leading to derivation of accepted best management practices for the catchment
- Fourteen individual farm plans that address specific water quality issues with practical voluntary 5 year plan and budget
- November 2008 meeting for Aorere dairy farmers hosted by the Aquaculture Industry – water quality improvements mean harvesting at that time was up from 50% to 71% in the space of the project

Waihora Ellesmere Trust

Over the last two years Hamish Rennie has been involved in the establishment of the Land Environment and People Research Centre (www.leap.ac.nz) and developing a Joint Centre for Water Resources Management between Lincoln and Canterbury Universities and chairing the Waihora Ellesmere Trust.

The Waihora Ellesmere Trust has been successful in obtaining multi-year funding from the Sustainable Farming Fund to carry out and promote riparian restoration on the Lake's catchment. This work has been supported by a significant Sustainable Management Fund contribution and Environment Canterbury. The Youth Hostel Association's Green Footprint programme has provided ongoing support for the Trust's riparian restoration at Coes' and Chamberlain's Fords on the Selwyn River and the mudfish habitat restoration work coordinated by the Trust with DoC and Selwyn DC at Mitchell's Road received significant support from Golder Associations enabling 1077 trees to be planted by the community in June. The Trust is also working with Selwyn DC to develop demonstration sites with drainage contractors to improve drain management practices. More information on

the Trust's activities (and how you can join or contribute) can be found at www.wet.org.nz.

The Trust will be holding its second Living Lakes Symposium (LL2) at Lincoln University on 4th November 2009. In 2007, the first symposium reviewed scientific information on the state of the lake and among the outcomes of the symposium was the establishment of a Statutory Agencies Group (SAG) that comprises Ngai Tahu, Environment Canterbury, Selwyn District Council, Christchurch City Council, DoC, MFish, Fish and Game, and the Waihora Ellesmere Trust. The SAG facilitates a coordinated approach to lake and catchment management issues for Te Waihora Lake Ellesmere and is facilitated by the Trust. In 2011, the resource

Continues Page 10

Sediment Credits

Bob Catchcart looks at a new approach to managing sediment.

This paper is just some personal thoughts and is not Northland Regional Council policy. In fact the Council has not even discussed the topic although it may well form part of a wider sediment management, flood risk reduction strategy.

A base level of sediment can be expected to be lost/eroded from most land regardless of vegetation. Even under healthy native bush, soil is lost and contributes to the sediment load of downstream rivers. The volume of sediment lost is a function of rock type, age and depth of weathering, soil type, actual slope, length of slope, and total rainfall and rainfall intensities experienced in that area.

Greater volumes can be expected when bush cover is removed and is replaced by other vegetation types. This increase can be reduced to some extent by good husbandry practices, which in the case of pastoral farming, for example, may include poplar and willow planting, sediment trapping methods, improved pasture management, etc. Similarly, the forest industry has adopted a code of practice to manage sediment yield.

Natural wetlands and ponding areas, floodplains, the intertidal estuarine marsh areas, and the tidal flats themselves all play a role in capturing, storing, or managing sediment being carried to or by rivers. Structures and activities like:

- stopbanks - which reduce the frequency with which floodplains flood and deposit their sediment;
- channelised flow - which directs floodwaters quickly through to harbours instead of ponding on floodplains; and
- reclamations which - reduce the area of land covered during very high tides or floods and on which sediment may be trapped,

all increase the volume of sediment deposited in lower river tidal channels, estuaries and harbours.

Given that different land uses generate different levels of sediment, there is an opportunity for some form of exacerbator rate/land tax with a differential to recognise the effects of the different land uses. Implementation of good husbandry practices can reduce these volumes so land users could either change land use to something less intensive, or remain with the same land use but implement the recommended mitigation measures. That is, we could have a land area-based catchment rate according to the erodibility of the soil, with a differential based on whether it is in bush, exotic forest, scrub, or high producing pasture. Each of these different levels of rating can be discounted in recognition of appropriate mitigation measures.

Similarly, floodplain and harbour activities influence whether and where sediment is or is not deposited. Should someone, for example, build a stopbank which

reduces the area of the floodplain and therefore the volume of sediment deposited/trapped, they should pay a higher rate to offset their land use, and the extra costs to both the management of the river channel and the effect on the estuary or harbour. The land rate on the floodplain could be discounted where landowners encouraged floodwaters to flow across their land trap and encourage deposition of sediment. The trapping could be enhanced by different grazing or land use regimes and the landowner would be credited accordingly.

That is, land which because of the form of land use generates more sediment should pay to offset the extra costs created downstream (economic, social and environmental). Similarly, those who deprive the catchment of its sediment trapping mechanisms or reduce their effectiveness should also pay.

The funds generated by this sediment management rate would be used to do works or establish mechanisms for managing sediment. They could be used to subsidise afforestation of upper catchment land, retirement to indigenous vegetation, animal pest control (to improve forest health), or planting of poplar and willow trees. They could be used to enhance the sediment-trapping effectiveness of floodplains, and could be used to restore reclaimed estuarine and harbour land to its previous natural role of managing sediment. They could also be used to fund dredging of channels to retain capacity.

Just as carbon credits are transferable, there could be a case for a person wanting to stopbank a section of floodplain or to use erodible land more intensively, to offset the added costs created by that activity by planting land or trapping sediment elsewhere in the same catchment.

Bob Catchcart



Sediment laden drainage, Betsiboka River, Madagascar. Looks like they could use a few poles. (photo: NASA)

President's comment

This year our conference is later than usual and is located at the northern end of New Zealand, at Waitangi, and we are combining with the Grasslands Association to bring an informative conference to you. It will be difficult for some of you to go, the logistics and costs of getting there are not easy, but NZARM conferences have often been scattered around our countryside, and having attended every one of them since 1996, there always seems to be a crowd that gathers and enjoys the experience. Please make an effort to come, Grasslands have been very supportive and I would like us to reciprocate by attending. The subjects are mostly pastoral orientated with our environmental management themed parallel sessions also in the mix. To have been successful or even understand the rural community with some clarity over the years, I always paid a great deal of attention to the Grasslands Association and its conference proceedings. There is always some very good information in their proceedings that relates to our work with the pastoral sector, not to mention that some of their members have been some of the most invigorating people to work with.

I've always wondered who actually did read the excellent proceedings other than the attendees of conferences or members, and diligent varisty students, and who does translate their knowledge into extension to allow the rest of the pastoral sector to learn. In fact, where is the pastoral sectors extension service? A good question for their conference perhaps. Sometimes I wonder that if the evolution of farm systems based environmental management continues then we will probably see a growth in Regional Council staff having considerable knowledge and extension capability of a sector that should be cornering this market themselves. Our work is not rocket science and needs commercialisation, but when will, and where is, the pastoral sectors response to what I would consider to be another business option for them, providing advice of environmental management. It's the only way that there will ever be enough extension providers of environmental management concepts and perhaps this will be the catalyst to re-invigorate the extension service within the pastoral sector.

This leads to another issue that is starting to require Regional Council extension service response – for carbon. I had a farmer from Kati Kati ring the other day – 'where can I get a carbon balance assessment for my farm business?' The answer is actually quite hard and plenty will tell me variable, depending on whom you talk to and what model is used. I think it's a fair question right now, not conflicted by Kyoto requirements, just where is my business position. It did not help that there was four businesses within his enterprise. However if there was a flood of requests we, Council's, and MAF advisors, would be stumbling to keep up, and yes, while its early days and there is much research going on, entrepreneurs (farmers) can move faster than this. They react quickly, particularly if the carbon market industry proves to be a sound investment – what drives that investment is volume of carbon sequestered and that means trees in the ground. And you can see the mind ticking - if that's the case then let's get them in the ground! But who is out there to provide this service? Where is the pastoral sectors extension

or support response? Waiting for ETS clarification – probably. But it certainly won't be coming around the corner soon, when the sector is struggling to identify if they should be paying a levy and for what. Their one extension focus – the monitoring farm approach, is struggling to retain some foothold. Perhaps there's another boom time for forestry consultants ahead.

The interesting thing will be to watch how an individual's capability to deal with carbon or greenhouse gas emissions within their own business occurs, versus a sectors collective response to the emission reduction requirements. I don't think farmers who carbon 'farm' will have any more or less of a business risk than the commodity driven one they are in. But a collective response? They can't collectively sort out their meat industry. Aligned to this is the issue of protecting our valuable land for production, particularly if we do see our hill country landscapes alter to a different 'farming' beat. Surely managing our national land resource must be as important as managing our green house gas issue. Where are our leaders on the protection of land for production? As a nation where do we collectively engage on land, to help inform policy that in turn delivers a national response to our long term future in protein and fibre production? In years gone by, the National Water and Soil Conservation Authority, a centralised body that had threads linking to the regions, delivered a collective approach to national issues of water and soil management. Is it not time another forum delivered something similar – will the EPA do this? Currently, most of us would say the issue of land sits within local government, but if there is not enough experience and capability within local government policy and planning, and this definitely is the case within most district and some regional authorities, land planning falls through the cracks.

Perhaps the solution lies with our reinvigorated catchment management ethic, whereby individuals and the 'collective' achieve a level of localised utopia that results in a win win situation for all concerned. Facilitated transfer of knowledge and solutions. This may allow for communities to develop catchment economies based on their catchments capability for use, production or otherwise, and that the need for extension is minimised to knocking on your neighbours door. At least this would solve the pastoral sectors problem.

Cheers Simon

BROADSHEET is available
electronically in full colour.
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Waihora Ellesmere Trust cont.

Continued from page 7...

consent that enables the artificial opening of the Lake to the sea will expire. The Trust has run a community consultation process to consider different scenarios for the Lake. At LL2, researchers from several organisations will present the latest scientific information and some innovative modelling of the Lake and its tributaries to scientists, resource managers and the community. This will shape the future lake opening regime and the related resource consent application.

Staffing of the Trust has also stabilised with the recruitment of Malcolm Anderson (Development Manager), Golda Varona (Contracts and Administration Officer) and Sarah Edwards (Education Officer).

Hamish Rennie



Regional Roundup

HAWKES BAY

After a dry Autumn, mid winter rains have given some respite but its heading for dry conditions again. All challenging stuff for landowners (and advisors) trying to improve farmland conservation.

A couple of new projects are in their early phases in Hawkes Bay, both aiming at 'resilient farming', but not surprisingly are also focused on the basics of resource conservation. **Ian Millner** is working with a group of farmers in the Huatokitoki catchment after a successful SFF bid. Their focus will include looking at more drought tolerant systems. Ian and **Chris Perley** presented at three drought recovery meetings and had excellent feedback from farmers and even some thinking consultants! Looking more at the longer term management of soils and vegetation, rather than immediate ambulance type responses, certainly gave hope to many enthusiastic attendees. The Power Point they used is available on request. Further to the north in Wairoa **Peter Manson** and **Nic Caviale** are working in three catchments after a successful HCE bid for funding. While the outcomes are expected to include an enhanced uptake of soil conservation techniques, farming related community issues are going to be drawn out and dealt with by an independent facilitator. Mt. St Helens is where **Warwick Hesketh** received his latest hands-on training, however its been debated how relevant cubic km's of earth are to a local situation – we're not quite there yet. So yes, he saw the biggest landslide in history. Education of the next generation of conservators, saw **Brendan Powell** taking local tertiary students out tree/pole planting – great to see that the art of pegging soil to the hills won't be lost for a while yet. A very high uptake of the Regional Landcare Scheme has kept **Neil Faulknor** busy in the south of the

region. A particular interest in biodiversity activities by farmers has added to the large amount of soil conservation planting required after a wet winter. A recent purchase by the HBRC of a steep erosion prone property adjacent to the Tangoio soil Conservation reserve, has meant that **Joe Devonport** will be well occupied for the next season or two. A strategic purchase, with multiple regional benefits will allow moves toward public access as well as environmental *and* profitable land uses for rate-payers. Joe has also just completed significant forest plantings at Tangoio of *C. lusitanica*, *C. torulosa* and *Acacia dealbata*.

Other than soaking up the sun in Yaroomba for 3 weeks **Garth Eyles** has been doing the 'odd contract'. He has just completed a trip around NZ with Grant Douglas, for MAF Policy, talking about Land Use Capability. This has been very encouraging as the farmers have been particularly interested in the system which bodes well for the future. After 15 years I he is actually having to do a farm plan and not just supervising/training!! **Steve Cave** has coordinated the planting in excess of 45,000 trees and wetland plants, 80% native, as part of HB's flood control, wetland, stream enhancement and soil conservation (Tutira Country Park) programs. Several trial sites, have been set up on river berms looking at different preparation, planting and maintenance methods aimed at improving survival rates in this tough environment. Also, thanks to the generosity of EBOP, the HBRC in conjunction with HB Fish and Game, DOC and Gisborne DC, has just published a "working with wetlands in HB" booklet, a much needed resource for the Hawke's Bay and East Coast.

Peter Manson

Regional Roundup (continued)

TARANAKI

General

The Council's third five-yearly State of the Environment Report, *Taranaki: Where We Stand*, was officially launched by the Minister for the Environment, Dr Nick Smith, on 14 April. It was pleasing to hear the Minister for the Environment, Nick Smith, describe the report as "best practice".

A Council report examining the effectiveness and efficiency of the Fresh Water Plan has been presented to Council and circulated to key stakeholders. It concluded that the Fresh Water Plan is standing the test of time, and there is no urgent requirement to review the Plan ahead of its statutory review in 2011.

A similar report examining the effectiveness and efficiency of the Soil Plan has commenced. Staff have provided input into the review as part of an internal assessment of effectiveness and efficiency. That report will then be circulated to stakeholders for their comment. There is renewed interest in forestry as landowners here about new opportunities through the Afforestation Grant Scheme. However, this has also been tempered to a degree, with the uncertainty created by the ETS review.

All targets were achieved by the Land Management team last financial year except for the number of plants sold through Council's native plant scheme. 300,000 plants were contract grown by nurseries but only 254,000 plants were sold to landowners which is around 10,000 ahead of last year. There was a significant reduction in interest from dairy farmers after the payout forecast was dropped to \$4.55. Interestingly though, there wasn't a surge in interest for extra plants when the payout was previously at \$6.90.

Don Shearman has been busy getting Council's stage 2 application called "South Taranaki and Regional Erosion Support Scheme" (STRESS) in to MAF's hill country erosion fund. This has now been approved so a promotion and implementation programme can now be formulated. The project is focused in the Waitotara Catchment but also includes other areas throughout the region with a high erosion potential. It will assist landowners with: the cost of

3m poplar and willow poles; forestry establishment, and the fencing of native scrub for retirement. Kids rugby coaching is over for the season so its back to being an armchair critic. Summer landscaping jobs are just around the corner and the golf clubs are still dusty.

Congratulations to **Darren Scown** who is now the father of a baby girl. He chickened out from going to the South Island on his motorbike a week before the baby was born for one last hurrah. Is it do-able he asked? No it wasn't! Getting a good night's sleep isn't either. Darren is also busy securing another 260000 native plants for next winter.

Kevin Cash has finished organising most of Council's poplar nursery development. The site was used for riparian plant dispatch for the second year, but this time with comfortable facilities for the dispatch staff. He has also moved into his new house, been on holiday surfing in Bali and now cruising on his new Aprilia "tuono" motor bike.

Jason Loveridge has completed another successful carbon farming seminar on a property that is about to be completely converted to forestry for carbon farming. Jason has Swiss connections so it was inevitable that his new puppy would be of Swiss origin. His Burnese puppy weighs in at 50kg after 2 weeks and is expected to reach 100 kgs soon (slight exaggeration).

James Annabell is our new hill country Land Management Officer who has taken over from George Powell who has gone back to Horizons. James comes off a Taranaki hill country farm, has a background in law as well as serving 3 years at TRC as a LMO focusing on riparian management. James has also been in the Taranaki Rugby team for the last 2 years and has just returned from playing rugby in Germany before taking on his new role.

On the 1st of July 2008, NZARM member, **Russell How**, and Nerida started a business called "Return 2 Earth", based from the Landfill at New Plymouth. Return 2 Earth takes delivery of all the green waste from the New Plymouth Transfer Station, woodchip from Asplundh, stable manure from the New

Plymouth Racecourse, chicken manure from Ross Poultry, goat shed manure from milking goat farms and turns it all into a quality compost.

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Russell says the first year was hard work, a steep learning curve, very rewarding and a lot of fun. He is enjoying the challenge and excited about the opportunities being presented to him as more people are becoming aware of what he is doing. If you are interested in more detail about the business they can go to www.return2earth.co.nz or are welcome to visit at anytime. Just give him a call and he will be more than happy to show you around.

Primary attention for **Dex Knowles** has been devoted to work associated with consultants progressing details for upgrading the Lower Waiwhakaiho Flood Protection Scheme and other work in the river control activity.

MANAWATU-WANGANUI

In the last couple of months we have re-hired two ex staff who have each returned to Horizons after a few years away; Richard Airey and George Powell. Apart from that we are busy doing the normal stuff; getting poles and pine trees planted, and implementing the SLUI sustainable land use initiative. We are now up to farm plan number 205. We now have 150,000 ha of mapping done and 2000 ha of tree planting.

Malcolm Todd

Regional Roundup (continued)

CANTERBURY

Peter Weir of Ernslaw One and **John Douglas** of EBoP are part of a small team convened by the new Environmental Protection Agency to scope out a potential National Environmental Standard for plantation forestry under the RMA. Brett Gilmore of Pan Pac in Napier and Joe Davenport of Hawkes Bay Regional Council recently hosted Peter Weir and two Ministry for the Environment officials on a whirl-wind tour of Pan Pac's northern forests, covering almost all aspect of plantation forestry, including archaeological sites and quarrying, and the temptation of mountain biking.

Chris Phillips (Landcare Research) has been trucking along doing a range of things including: helping Peter Weir and the forestry sector scope out what might be needed as part of an NES for plantation forestry; frantically dealing with internal and external science providers with respect to the FRST fresh water bidding round; helping out the Styx Living Laboratory Trust in Christchurch with various submissions on plan changes and the like; liaising with SCION, Plant & Food, and AgResearch colleagues to design trials to look at a range of species root development - including the perennial favourites willow and poplar and some unusual species such as cherry trees and oaks; been to an NZARM exec meeting to keep the Association's business ticking over; and extracting 4 and 5 year old native plants from our trial site in Gisborne. And if you didn't know already, a 3 year old carex plant has nearly 900 m of roots greater than 1mm, a 3 year old toe toe nearly 700 m, and a 3 year old mountain flax around 500 m - however most of the woody natives are lucky if they can get to 100-200 m at age 5 years. What plant do you reckon would be good for erosion control?

Hamish Rennie moved from Waikato University's Geography Department to Lincoln University in April 2007. At the start of 2009 Lincoln's Natural Resource Engineering Group merged with the Environmental Management Group to become the Department of Environmental Management (DEM) as Lincoln returned its structures to those of a more traditional university with Deans, Faculty and Departments replacing Directors,

Divisions and Groups. The DEM is in the Faculty of Environment, Society and Design (FESD) which includes the School of Landscape Architecture, and the applied computing, social science, sport, tourism, parks and recreation folk. The Faculty is about to celebrate the 40th anniversary of the School of Landscape Architecture with the opening of its new state-of-the-art building on the space where the swimming pool and McCaskill Laboratories stood.

Hamish teaches the first year *Perspectives on the Environment*, third year *Professional Practice* and the Post Graduate *Advanced Resource Management Law* course and contributes to post graduate courses on *Environmental Impact Assessment* and *Urban Regional and Resource Planning*. Most of these are compulsory parts of environmental management programmes professionally accredited by the NZ Planning Institute, but there are also many environmental science students taking the courses. A number of professionals take the law paper as a one off professional development paper. Aldo Leopold's Land Ethic features prominently in the first year course and, in Professional Practice, the students study the NZARM Code of Practice and are introduced to the LUC Handbook (3rd Edition) and the importance of care groups, farm plans and soil and water conservation. Cases that address land fragmentation, urban growth, enforcement and versatile soils are included in the resource management course and this year's assignments include Water Conservation Orders.

NZARM members should not be surprised by this type of content as an understanding of how the biophysical world works and the means of managing human relationships with it would seem obviously important, but most professional planning degrees are urban oriented. Lincoln's Bachelor of Environmental Management and Planning is the only NZPI accredited programme that *requires* planning students to be at least competent to second year level in biophysical sciences! This reflects the longstanding connection of the University with agriculture, its ongoing focus on adding value to land-based industries, and the resource and environmental sustainability orientation of the DEM staff. For Hamish, a farmer's son, geomorphologist-cum-social scien-

tist/planner and longstanding NZARM member, Lincoln is a comfortable fit.

Ray Maw (ECan) has recently returned to the pests and biodiversity fold having completed a three year stint leading a team of policy planners involved in reviewing the minimum flows of Canterbury's rivers. The new policy analyst role came about as a result of pests and biodiversity policy activities being more closely aligned within ECan. Ray's collaborative work involves the provision of policy advice to internal and external players at the local, regional and national levels. Maintaining the integrity of the Regional Pest Management Strategy and the Canterbury Biodiversity Strategy is the key focus of the role.

Ian Brown has joined the ECan team (although is yet to complete his NZARM membership form) as a Land Advisor following a five year stint as a consultant. In his new role, Ian has two main areas of focus. The first is internal, providing advice and coordination across the land related activities that the council undertakes. The second is an external role developing closer links with the primary sector and other land stakeholders. In this role, Ian hopes to develop opportunities for collaborative problem solving and partnership initiatives, and to strengthen the linkages between the council and all those associated with rural land use.

John Glennie, Cathie Brumly (who is also yet to submit her NZARM membership) and their colleagues in the ECan planning team have been undertaking a range of activities. The major achievement for those working on the Natural Resources Regional Plan has been the completion of hearings on Variation 1 comprising Chapters 4-8 which deal with land and water management. To put this into perspective, to reach this point it has involved responding to 763 submissions with a total of 62,018 submission points, each of which will require a separate decision to be made. Over 400 people attended the hearings which were heard over a total of 74 days. If that doesn't give you a headache just reading those statistics, I can assure you that there were many headaches involved in completing such a huge task and making sure that every issue was addressed consistently and that changes were integrated throughout

Regional Roundup (continued)

all the chapters!

Two additional variations dealing with the reasonable use of water for irrigation and the setting of allocation limits for groundwater were also incorporated into the Variation 1 process thereby adding more submitters and more decision points to the overall tally.

The Hearing Panel is working its way through all the evidence presented and we expect their decisions to be released later next year 2010.

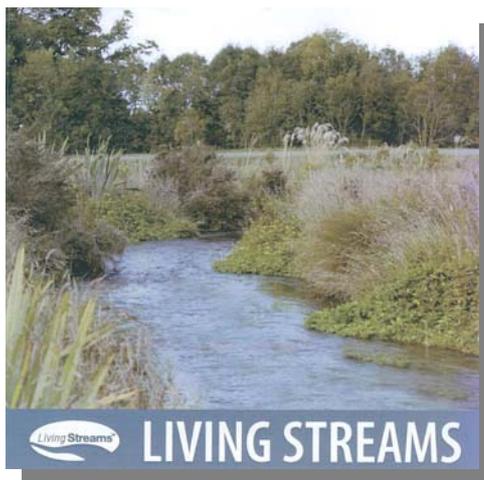
A review of the Regional Policy Statement for Canterbury is also underway with the aim to notify the revised document for submissions later next year. This will be the guiding document for both regional and territorial authorities.

A number of other projects are now being picked up by planning staff while the hearing panel works through the NRRP decisions. These include:

- a review of the surface water allocation regimes for the Waimakariri and Rakaia Rivers and of the consents for groundwater takes in the Chertsey/Ashburton/Lyndhurst groundwater zone. In both cases the outcome will be to align the management of water more closely with the objectives in the NRRP.
- a project looking at the effects of land use intensification, primarily from diffuse source discharges, on surface and groundwater quality. A regional map of land uses has been completed and considerable amount of work has been done to try and estimate leaching rates of nitrate-nitrogen from land uses across the region. The next step is to undertake some more detailed work in one or two catchments to look at how nutrient loads might be managed.
- A 10-year review of the Land and Vegetation Plan Parts I and II applying to earthworks and vegetation clearance in Coastal Kaikoura and the Port Hills is being undertaken before being notified later in 2010. Part IV of the same plan applying to the management of vegetation burning in the hill and high country will also undergo an interim 5-year review to identify how effectively it is being implemented. Input from stakeholder groups will be sought during these processes.

- the preparation of guidelines for assessing the current and potential functions of riparian margins and measuring progress in improving their management.
- the mapping of river bed boundaries. This project is just beginning and due to be notified as a variation to the NRRP Chapter 6 (Beds of lakes and rivers) in the following year. This project will provide clarity to the definition of the extent of the bed of a river and where the application of s13 provisions cease and general land use provisions under s9 of the RMA apply.

Judith Earl-Goulet have continued to be involved in a range of work as have the other members who are part of the Resource Care team at ECan. The projects and programmes we work on continue to advocate for sustainable land management practices and the building of capacity for individuals and groups to be more involved in the management of the regions natural resources. The Resource Care team recently completed a review of the Living Streams programme – this is the assessment of waterway health and land management activities in 40 catchments. The team has recently developed a community initiated process for the Living Streams programme and has gone electronic with a wide selection of resources now accessible from the ECan website. Why don't you check it out some time: <http://www.ecan.govt.nz/Protection+and+Education/Resource+Care/>



Shelley Washington continues her great work within ECan and has a range of projects and programmes on the go. She is the ECan liaison person for the Avon-Heathcote Estuary Ihutai trust (AHEIT) and as part of this she project manages a number of ECan activities that have been jointly agreed to by ECan, AHEIT and Christchurch City Council.

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Regional Roundup (continued)

NORTHLAND

After 39.5 years with the Northland Regional Council and its predecessor the Northland Catchment Commission Dave Roke has retired as Consents Manager. Dave and Marion are currently on holiday in the U.K., where they have a daughter. On their return he will be working for the Council a few days a week, assisting with some of the major or more complex applications. Dave leaves his full-time employment on a high note with his Team having processed 98.5% of applications within the statutory time limits during the 2007/2008 year, performance acknowledged by the Minister for the Environment.

Dave was one of the first to join the newly formed New Zealand Association of Resource Management when the old Soil Conservators Association opened its doors to the wider water and soil management fraternity. As well as processing applications for resource consents, Dave spent his years with the Northland Catchment Commission investigating the region's water resources and preparing water allocation plans on a catchment by catchment basis.

In particular Dave developed a thorough understanding of our rather limited groundwater resources as pressure went on during the kiwifruit boom. He even grew the furry little critters himself until he was paid to remove them. The volcanic soils favoured by horticulturists have in more recent years been planted to avocado so that Northland now boasts something like 70% of the nation's crop, again stressing the groundwater resources. As well as avocado, citrus is expanding around Kerikeri and on the Aupouri Peninsula.

One of Dave's biggest challenges was to unravel water allocation in Kerikeri. When the Catchment Commission assumed responsibility for water resources in the mid-north it found that the Ministry of Works and Development had over allocated available water by 300%. Some cynics claim that that was to generate support for a community irrigation scheme. It certainly demonstrated the value of water to desperate, even armed orchardists and brought the first grey flecks to Dave's hair.

With Dave retiring and Bob Cathcart taking on a lesser role as Land Programme Manager, the Council recently had a few drinks in recognition of over 39 years service by each of these officers. Amongst former workmates who made the trip north to share in the celebration were Peter Palmer, the engineer who played a big part in building the Hikurangi Swamp Major Scheme, and former soil conservator, coast-to-coast competitor (and a whole lot of other more dubious attributes) Lee Whiley. Good to see some of the old crew again.

Bob joined the Northland Catchment Commission in January 1965 and by next January will have been involved in water and soil management for 45 years, five and a half of those with the North Canterbury Catchment Board and the rest in Northland. Recognising that land management staff joining the Council in recent years have spent little time on old fashioned soil conservation and erosion control work, plans are afoot to transfer 45 years of practical experience to the next generation.

Just in time as there is increasing public and political pressure to tackle the region's most widespread and serious pollutant, sediment. Its time to get back out in the field and deal one-on-one with landowners and land managers. It's the renaissance of soil conservation and time to dust off the old methods. Recent discussions with President Simon Stokes and with Russell Knutson of the Ministry of Agriculture and Forestry suggest that this need may not be confined just to Northland.

Bob, Helen Moodie of the NZ Landcare Trust and Debbie Johnson, Land Management Officer from the Regional Council are all on the local organising committee for the joint NZ Grasslands Association-NZARM Conference in November this year. Make sure you set aside the first week in November for a visit to Waitangi. Helen is also the coordinator for the recently formed Northland Rural Support Trust. While we may have been one of the last region's off the block, a very enthusiastic Trust and Helen's experience in organising the rural cleanup after the two 2007 storms have rapidly got us up to speed.

The Land Management Team at the Council now comprises Bob, Kathy Mortimer, Debbie Johnson, Lisa Forster, Laura Shaft, Kerry Webster and Wayne Teal. Kathy manages the Environment Fund programme and is responsible for coordinating the distribution of over \$500,000 in grants each year. At peak periods of the year she has all on the run, inspecting proposed works and processing claims for completed works. Activities eligible for up to a 50% grant from this fund include fencing and protection of indigenous vegetation, excluding stock from indigenous wetlands, excluding stock from the coastal marine area, re-establishment of indigenous vegetation and weed and pest control within covenanted areas.

The fund also supports Laura Shaft's coastcare projects, particularly community projects to re-establish and protect indigenous vegetation on foredune areas. As well as coastcare, Laura is involved in the controversial vehicles on beaches project, in her case encouraging improved behaviour rather than policing.

Debbie, who works three days a week, works with farmers and rural professionals on the Regional Action Plan, Clean Streams Accord, with the Meat and Wool NZ monitor farms, the Environment Fund, and general advisory work. Lisa, our Biodiversity Officer, is the top botanist in Northland. Her major project is the establishment of an indigenous wetlands database and the ranking of significance of the various types wetland. She too is heavily involved with the Environment Fund and is in constant demand by other members of the staff wanting her professional opinion on any matters to do with indigenous ecosystems. Almost every time she goes into the field she comes home with a new species, a species previously considered extinct, or a new weed species.

Kerry only works a couple of days a week, mainly on Environment Fund projects, and also takes a special interest in projects affecting the Kaipara Harbour. We hope to get a bit more of her time when she finishes building her house, not supervising the builder but doing it herself. Wayne is our GIS specialist but is also very field savvy with a thorough grounding in botany and plant

Regional Roundup (continued)

ecology. He too handles E-Fund projects, taking particular interest if they involve limestone country where there is an off-chance of following his favourite recreation of caving.

Geoff Heaps looks after most of the land resource consents for the Consents Department, calling on field experience from his former life as a soil conservator for the Ministry of Works and Development in Northland. Another Northland NZARM member Ursula Buckingham from Hancock Forests is working very effectively from within the industry, promoting sustainable land management practices and compliance with the company's certification.

BAY OF PLENTY

Norm Ngapo is back at Ohope Beach after spending 6 weeks visiting Canada (British Columbia / Ontario / Quebec) for a holiday and catching up with relatives. While there took some time to check out the salmon and crab fishery at Bamfield Harbour on Vancouver Island. The Spring Salmon fishery was a bit spartan, but the Dunganee Crab fishery is in excellent health. It was amazing to see large numbers of stray logs that have washed up on shorelines from the huge log rafts that are used to transport logs down the river and harbour systems. Back at work in NZ looking at streambank erosion control works in the western Bay of Plenty, as well as land use capability work in the Rotorua lakes area.

John Whale is helping out the 'old firm' with some policy development work for the current review of the Environment Bay of Plenty Rotorua Geothermal Regional Plan. Had enough winter - Looking forward to summer and fishing.

John Paterson, Sustainable Farming Advisor with EBOP, is facilitating a Sustainable Farming Fund project with Lake Okaro farmers who have formed the Okaro Community Lake Restoration Group. One of the first objectives is to investigate environmental accountability using a Community Environment Management System (CEMS); getting the whole community (5 or 6 farmers) within the lake catchment involved, using the Overseer nutrient manage-

ment towards the agreed outcome. The project also has a community/social dimension with regular social style get-togethers to update members on science progress and mull over issues. John is also giving a paper 'EMS in New Zealand Pastoral Farming and their Role in the Rotorua Lakes Restoration Programmes' to the Environment Management Systems conference in West Australia in September. Watch for an item on the paper and any feedback in a later Broadsheet.

WAIKATO

Gabriele Kaufler.

- Right now we are 'sorting out' the effluent industry, getting some industry standards in place. Currently a Code of Practice is being drafted, and linked to that the respective training modules will be developed in the future. This will enable system designers and installers to be up to speed with all the requirements that enable improved outcomes of effluent land application. The dairy industry is now funding this work.

- We are working closely with AgResearch to further develop and implement the environmental farm plan for the Tokanui farm. Guidance re. baseline data documentation and best management practices for the dairy conversion was provided right through the process. An educational concept is currently being developed, too.

- Maize seems to be a useful nutrient management tool for dairy effluent paddocks. Second year trial results from the project we initiated with FAR have confirmed that no fertiliser is needed if maize is grown on long-term pastoral land which has received effluent in the past - saving \$149 to \$333/ha on fertiliser cost. No yield differences were measured! Together with the project partners we are currently producing best management guidelines for growing maize on dairy farms.

- Effluent nutrient management requires some understanding of the nutrient composition. Promoting and finetuning of effluent testing is helping farmers to understand the value of the resource at hand.

John Quinn

The Restoration of Aquatic Ecosystems programme, led by John Quinn, has published 12 papers and a foreword on restoration of streams, lakes and estuar-

ies in a special issue of NZ Journal of Marine and Freshwater Research 43(3). Subscribers can view the full papers, and non-subscribers can view the abstracts, on line at the link below <http://www.royalsociety.org.nz/Site/publish/Journals/nzjmf/2009/default.aspx>. Four papers that address the effects of on-farm best management practices and riparian management are likely to be of particular interest to NZARM members: (i) Modelling effects of riparian reforestation <http://www.royalsociety.org.nz/Site/publish/Journals/nzjmf/2009/059.aspx> (ii) Case studies of riparian management effects on stream invertebrates and fish <http://www.royalsociety.org.nz/Site/publish/Journals/nzjmf/2009/066.aspx> (iii) Whatawhata ICM effects on stream flow, habitat and biota <http://www.royalsociety.org.nz/Site/publish/Journals/nzjmf/2009/067.aspx>; and (iv) Effects of on-farm best management practices and riparian management on a dairy catchment stream <http://www.royalsociety.org.nz/Site/publish/Journals/nzjmf/2009/068.aspx>.

EW ICM Team (Ross, Paul, Don)

In the ICM team working in the Upper Waikato we are just putting finishing touches on the report wrapping up our first 3 years. What this is showing is that there is a willingness from farmers and industry to define solutions together to counter nutrient issues in the Upper Waikato. That said, the current suite of best practice technologies we have won't get our leaching losses down low enough to address water quality decline (we believe). So, new tools will be needed, or, we will need to reduce farm intensity in this area. This is likely to require a different policy mix to achieve standards so we are feeding this back into policy development loops for the future. Watch this space.

Lake Taupo Catchment - Variation 5 Implementation Team

Firstly staff changes.

Faith Barber departed in February on maternity leave and is now the proud mum to James. In Faith's place we have **Gemma Platts** - a real RMA guru from Taupo District Council. Next to go was **Jan Hania** our manager, who is now the Area Manager for DOC Hawkes Bay. He has been replaced by **Natasha Hayward** from EW - previously man-

Regional Roundup (continued)

aging Utilities consents and monitoring. Hopefully Natasha will remain as our manager after the restructure of the Resource Use Group of EW - underway as I write this article.

Finally there is light at the end of the tunnel with the likely finalisation of our rules governing nitrogen discharge from farming activities in the Taupo Catchment in the next few months. After direction from the Environment Court at the hearing last year, consultation between Environment Waikato and the appellants has been undertaken to 'iron out the creases'. So far consultation has been relatively smooth and we anticipate the Environment Court Judge's final ruling and confirmation of the Taupo Variation rules before the end of the year.

In the meantime Gemma, Derek (Ryan) and I have been busy benchmarking those landowners in the catchment that are proactive in terms of the new rules - those wanting to know what their benchmark is so they can plan ahead into the future. The benchmarking process is the first step towards gaining consent under RPV5. Landowners have to submit information pertaining to how their properties were being farmed between 2001 and 2005. Typically this information includes details of the farming operation in terms of stock breeding, finishing and movements on and off the property, fertiliser details and invoices, and details of cropping and supplements grown, exported or imported onto the property. We also collect information regarding topography, pasture type and status, soil tests, retired and effective areas. Rainfall data is supplied from NIWA and Taupo Pumice is the default soil type under the plan.

This information is collated and then sent to AgResearch for input into their Overseer Programme. AgResearch then prepare a draft Nitrogen Discharge Ass-

essment (NDA), that details how much nitrogen is being leached. The NDA is then reviewed by the landowner.

Once the NDA is finalised the landowner prepares a Nitrogen Management Plan (NMP) that details how they intend on farming in the future. The leaching rate from the NMP must be equal to or less than the NDA for a resource consent to be approved for farming - unless of course they purchase nitrogen from another landowner.

One of the main misunderstandings regarding the Taupo variation is that landowners must reduce nitrogen leaching by 20%. This is not the case. It is the goal of the Lake Taupo Protection Trust to reduce nitrogen leaching from throughout the catchment by 20%. The Trust is the agency that is receiving the 80 million dollars of public funds from EW, Taupo District Council and central government to achieve this goal.

We will keep avid NZARM members posted on progress.

Jon Palmer

Gwyn Morgan

Previously at Dairy NZ, I have recently become an independent consultant - covering contracting on policy development and community engagement, project management, dairy farm compliance, resource consent applications and environmental impact assessments. I will be operating predominantly in the Waikato & Auckland Regions but can operate on contract in other regions.

WELLINGTON-WAIRARAPA

It has been another hectic winter in the south of the north island with a typical season of 20,000 poles going in the ground. The workload was further bolstered by Afforestation Grant Scheme (AGS) woodlots, with upward of 250,000 seedlings planted.

The latter half of 2009 will see some changes in the Land Management team with **Andrew Patrick** treacherously departing the team to pursue his girlfriend to Taupo. He has taken up a position working with forestry consents for Environment Waikato.

A further position to be filled this spring is a project co-ordinator for the Wellington Regional Erosion Control Initiative (WRECI) which will target hill country erosion through an integrated farm plan approach. If that sounds appealing then perhaps dust off that CV!

The rest of the team have in the meantime been hard at it with their various winter programmes. **Dave Cameron** has been staunchly wading into AGS; **Jacki Byrd** has been feverishly planting up riparian margins as part of the Stream Alive programme; **Angela Stead** has in between working on her annual farm programmes become the go to person for coastal dunes; **Don Bell** has been frequently sighted in the Wairarapa Valley working on the Wind Erosion Scheme and with numerous community groups; finally **Stan Braak-sma** has once again managed to straddle his responsibilities admirably between the Akura conservation nursery and his farm plan commitments.



Saving the hill country one pole at a time at Akura Conservation Nursery

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