

Efficient irrigation requires balancing act

By Gina McKenzie.

Combining technology, data and good farming practice is the key to getting the most out of your irrigation system, according to Oxford farmer Scott Evans.

Scott, who owns three farms with his family, says using a mix of on-farm knowledge along with hard data from his Irrigate IQ system helps him make the best decisions for both his farms and the environment.

“It’s not enough to think, ‘that looks about right’. You really have to use your data to make the right decisions. You need a system of using your knowledge, the data and long range forecasts to get the most out of your irrigation system.”

Being able to control each individual sprinkler on his irrigation system gives Scott an edge when it comes to saving water and also helps with maintaining farm infrastructure.

“When we go over different soil types we can control the rate of water by pulsing the solenoid. So, instead of putting 5mls on each area you can put 5mls on one area and then 2mls on another area depending on the soil. That’s a real saving for us in terms of

the amount of water we’re using.

“Being able to turn off the sprinkler when it goes over the top of troughs and tracks means you cut down on track maintenance and keeping the troughs dry makes it a nicer environment for the cows. We’re also stopping run off which makes it better for the environment.”

Scott says while he already knows which areas of his farm are wet and dry, the Irrigate IQ system has given him a broader overview of everything happening on his farms and allows him to react quickly to changes in soil moisture conditions.

“The system uses Google Maps so you have your pivot overlaid and then you select the areas where you want to place water so it gives you a good overview of everything happening on farm.

“We have soil moisture probes on all the



WIL environmental manager, Paul Reese, with Scott Evans.

farms with one at root level and the other one 5mls down. I get a report sent to my phone every two hours so I can see the latest soil moisture data. That helps us know that we’re holding the moisture where we want it to be.”

Scott is a shareholder of Waimakariri Irrigation Limited (WIL) and credits the irrigation scheme with allowing him to farm on land which he would otherwise not be able to farm.



Environment Canterbury is working closely with water consent holders and industry partners to achieve better management of the region’s water resources.

As part of this all Canterbury water users with a take of 5l per second or more are required to provide their water use data to Environment Canterbury before 31 July each year. Data logger and manual water data also needs to be supplied.

This helps us understand how much water is being used and helps water users understand how efficiently they are using the resource and whether it complies with their conditions, saving on compliance costs in the future.

It is up to you to ensure your service provider provides the information to us.

If you have a telemetry system the data is typically submitted automatically, saving you time and money.

If you have any questions please contact your service provider or Environment Canterbury on 0800 324 636 or visit www.ecan.govt.nz/watermetering.

Farming to limits – the new normal

By Chelsea Halliwell.

Across Canterbury, farmers are taking action to apply for consents to meet new water quality environmental responsibilities as new limits take effect. On-farm audits of farm practices and farm limits have become the new normal for the farming community, with many farmers already doing the right thing or on track to do so.

Last month, Environment Canterbury wrote to more than 1000 high priority farmers, kicking off an extensive information campaign to ensure that the word is spread about the requirements to farm within water quality limits.

Across the region farmers need to determine whether they require a land use consent this year. Environment Canterbury Chair David Bedford said that to start with, the council is contacting farmers who have more than 50 hectares of irrigated land.

“We know that these are the farms most likely to need a land use consent, and so we are working with industry bodies to ensure that farmers know the steps they are required to take.

“Farmers need to start by preparing nutrient budgets, creating a farm environment plan, and then applying for their land use consent.

“Water is important to everyone and the whole community needs to address water quality issues. There are now limits in place designed to achieve a balance between environmental needs and the needs of our regional economy,” he said.

Often, irrigation scheme shareholders are already covered under the scheme’s consent, but the onus is on the property owner to determine whether consent is needed.

Environment Canterbury has created a

The five steps to getting the thumbs up.

Determine whether you need a land use consent to farm

To determine your nitrogen losses, use OVERSEER®, or the NCheck tool at www.canterburywater.farm.

Prepare your nitrogen baseline

All farms requiring a land use consent to farm need to prepare a nitrogen baseline. If you need consent, contact your nutrient advisor for help, as you’ll need to provide your baseline as part of your Farm Environment Plan (FEP). We know there may be a delay for these to be completed, so let us know when you are on the waitlist to get yours done.

Create your Farm Environment Plan

All farmers requiring a consent to farm will need to prepare a FEP. Approved templates and industry help available at www.canterburywater.farm.

Apply for your land use consent to farm

Ready to apply for a resource consent? We offer a free one hour pre-application consultation to help you prepare. See www.canterburywater.farm for information.

Implement Good Management Practices on your farm

Your Primary Industry Sector has a set of agreed GMPs that can be used to improve water quality. Take a look at www.canterburywater.farm/gmp for help relating to your own industry.



website, canterburywater.farm, to provide all the specific information required for farmers across every water zone and industry. The website also links to Environment Canterbury’s new online tool, ‘NCheck’, which is free, simple to use, and now available to help farmers determine whether they will need a land use consent to farm.

Across the region, Zone Managers will be working directly with farmers to support them in providing the zone-specific information required in consent applications.

For more information, and Zone Manager contact details, please visit canterburywater.farm.

New opportunity draws Hurunui Waiau Zone Manager

By Tania Butterfield.

It was just before Christmas when Environment Canterbury's biosecurity team leader Leanne Lye was approached about taking on an interim position as Hurunui Waiau Zone Manager.

"It came right out of the blue. My first response was 'Are you sure you've got the right person?'" Leanne says.

"I'm not that good with all the fluffy small-talk stuff, so I was a wee bit concerned as to whether I was the right person to pick up the reins."

But regardless of those doubts, Leanne agreed to take on the role, allowing the current zone manager Kevin Heays to focus his immediate efforts on dealing with the aftermath of the Kaikōura earthquake.

"It was the challenge that made me say yes. I was ready for something different and it was a good opportunity at the right time."

Taking on a challenge, is a common theme that runs through Leanne's working life.

She spent three years working for the air force and part of this time was based at Ohakea, just out of Palmerston North.

"A friend and I talked about joining and thought yea why not give it a go, and then we got in and it was like oh okay... I guess we're doing this!"

The initial recruitment course was both physically and mentally challenging, but the experience has defined Leanne's attitude to her work.

"I don't like failure and so that determination to do well, perhaps came from my time in the air force. I've got a big fear of failure in anything that I do – that's my driving force to make sure I'm good at my job, or anything else I do in life."

After taking time off to raise her children and work part-time in a few jobs, Leanne began working as an administrator for Environment Canterbury's biosecurity team in Amberley.

The biosecurity team is largely regulatory – they work on education and advice initially but a large part of the role is ensuring farmers are complying with the regional pest management strategy.

"In theory, everyone agrees farm biosecurity is important and biosecurity as a whole is important, but when you drill down to individual land occupiers, there is tension between community expectations and individuals.

"It's about trying to get people to engage and see the importance of the role they play to protect their property. A lot of our work is about awareness and trying to engage with people."

Leanne has worked in biosecurity for over 13 years, with the last 6 years as the northern Biosecurity Team Leader.

Taking on a leadership role working with a predominately male-dominated industry has posed its own challenges.

"Whether that's me or the other female

officers out there doing their job – there's still part of the community that believes the woman should be at home in the kitchen and not out leading a team.

"Sometimes people make the assumption that who I am as a person is determined by the job I do – but they don't have any idea about who I am as a person, and they don't need to as long as I'm being fair and consistent, it shouldn't matter."

Working in the environmental space also brings its own difficulties.

"For Hurunui in particular, there's some historic stuff that's gone on that makes it challenging to build really good relationships.

"However, the organisational values [of Environment Canterbury] have changed a lot over time and I think we're more conscious now about how we deal with people – People First."

While the zone manager role presents a new challenge, Leanne is happy to be assisting the Hurunui Waiau Zone Committee and the zone team in achieving their water management goals.

"We're really lucky the staff in the zone team are great and have a great attitude and genuinely want to go out there and do their best for the district.

"I've been lucky in my work life and have had some great managers who have given me opportunities to try new things. Hopefully I've proven myself."





Hinds MAR project exceeds expectations

By Tania Butterfield.

It's been little over a year since the Hinds/Hekeao managed aquifer recharge pilot began, and already results are exceeding expectations.

The latest results from the MAR pilot, taken in March, have shown a 90 percent decrease in nitrate levels in the key shallow groundwater bore as well as an increase in groundwater which feeds the Hinds springs.

The pilot project, one of a number of water management solutions developed by the Ashburton Water Zone Committee in collaboration with the community, was trialled as a way to help improve water quality and quantity across the Hinds catchment.

Other key water management solutions

include improvements to on-farm water and nutrient use, and improvements in water supply and distribution.

Pristine water from the Rangitata River, part of the Ashburton District Council's unused stock water allocation, is delivered through the Rangitata Diversion Race and Valetta Irrigation Scheme to the MAR site.

At the site, the silt carried by the water is allowed to settle in a forebay before it is opened up and flows through to the main infiltration basin. From there, the clean water seeps down into the groundwater system to recharge it.

The system is carefully monitored and water is not supplied to the pond during times of significant rainfall to reduce the risk of flooding. Likewise, when the Valetta Irrigation

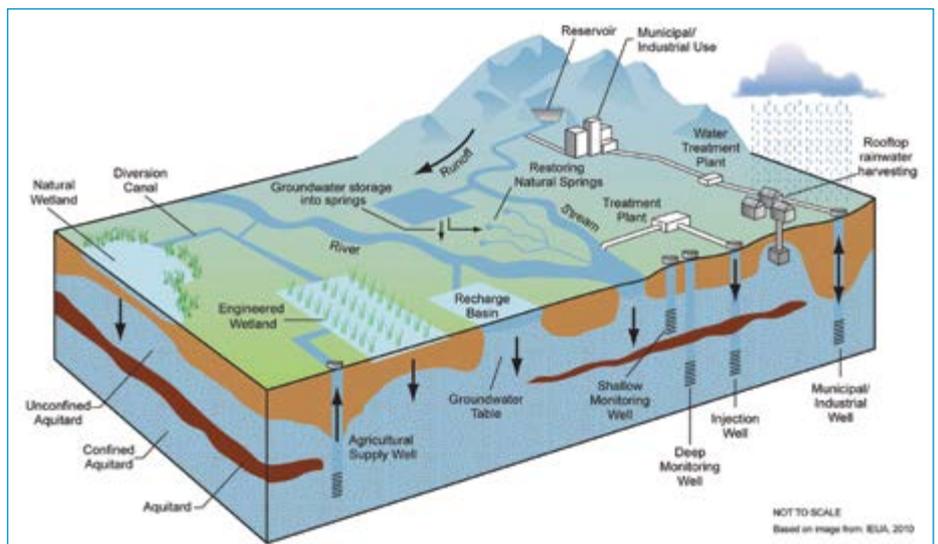
Scheme is at full capacity supplying irrigation water, takes are stopped.

In light of the success of the pilot to date, the Ashburton Zone Committee have established a MAR Governance Group. This group has been tasked with developing a recommendation for a catchment scale MAR scheme by March 2018 and will also oversee the operation of the pilot project. The group of 12 members includes representatives from the community, farmers, Arowhenua, and environmental groups.

The project has attracted interest nationally and internationally, and the project partners are collaborating closely with similar projects in other parts of Canterbury as well as Gisborne.



The sediment pond used for holding the water before it flows into the larger recharge pit. Water for the project comes from the Rangitata River via the Rangitata Diversion Race and Valetta Irrigation Scheme.



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