

MHVwater

Scheme News

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Message from the CEO

The 2018/2019 season continues to evolve as one out of the box with an incredibly dry January/February.

We appreciate the challenges for Shareholders on our Ruapuna and Valetta Lines as restrictions have impacted and we were pleased to welcome the rain earlier this week which has provided some relief.

Optimising our MHV infrastructure remains a key initiative that we are working through and as part of that optimisation we are investigating the demand for additional storage. We are aware that some shareholders have sufficient storage and that some do not.

This season our M Shareholders have had 100% reliability as a result of our storage at Carew. Please complete the MHV Storage Survey which was emailed on the 20th February. The survey is to help shape our discussions and planning for the future, especially with the progression of the Klondyke consent, and we would really appreciate your feedback.

Optimisation of our infrastructure also includes automation of our MH Open Race infrastructure which is an exciting next step in the evolution of our scheme. There are more details later in the newsletter which highlights why this is important to us, the outcomes of the trial automation and next steps including pond sensors and automated gates.

We continue to collaborate with ALIL and BCI for our replacement Discharge Consent and have shed meeting updates coming up in March to get your feedback on some of the key policy components of the consent. Eva Harris, our Irrigo Enviro Manager will be joining us for these presentations/discussions and I look forward to seeing as many of you there that can make it.

With the Information Memorandum also closing this week there remains plenty happening. Don't forget Shareholders and Managers are invited to join our Closed Facebook Page. This is a private group to enable communication across the Shareholders and a way to share interesting articles and to keep up to date with what is happening on scheme. If you would like to join please let any of our team know.

All the best,

Mel



Melanie Brooks, Chief Executive

Key Dates

1 March

Information Memorandum closes

See page 6 for details

8 March

Storage Survey closes

See page 6 for details

8 March

Environmental Shed Meeting

1pm @ Lagmhor Westerfield Hall

See page 6 for details

11 March

Environmental Shed Meeting

7:30pm @ Hinds Community Centre

See page 6 for details

12 March

MHV Board Meeting

12 March

Irrigation NZ Irrigation Operator and Manager Training - Ashburton

Visit Irrigation.NZ for registration and further details

Our Environment

Dairy Effluent Storage

Good Management Practice (GMP) requires all dairy effluent systems to have “sufficient, suitable storage available to enable farm effluent and wastewater to be stored when soil conditions are unsuitable for application”.

A lack of effluent storage makes it challenging to achieve GMP effluent spreading, so the auditors will place a high weighting on this target in your audit.

You can meet effluent GMP in your audits by:

1. Demonstrating you have enough storage by using the Dairy Effluent Storage Calculator (DESC);
2. Demonstrating assumptions used in the DESC are valid (e.g. dairy shed water use, constructed pond size);
3. Spreading effluent whenever conditions are suitable;
4. Regularly cleaning out stone traps and ponds;
5. Having soil moisture records to show conditions were suitable to spread effluent and solids, particularly in the cooler months.



An example of a good effluent pond

If your effluent storage does not meet the DESC recommended volume and you don't have a plan to upgrade, then you will receive a “C” or “D” grade for your audit. If you are unsure of your obligations, please contact the Irrigo Environmental team for more information.

Backflow Prevention Devices

Many shareholders hold effluent and water take consents with conditions around backflow prevention devices.

These conditions require installation of a suitable backflow prevention device and regular checks of them to ensure effluent cannot enter fresh water.

It is important to note these conditions only apply if your effluent is hydraulically connected to water, for instance if you use groundwater and effluent from the mainline can be sucked back into the well when the pump is shut off. These conditions are not applicable if your only source of water is the scheme, as your ponds and the piped system ensure there is no hydraulic connection with a waterbody.

If you are unsure about whether or not these requirements apply to you, please feel free to contact the Irrigo Environmental team.

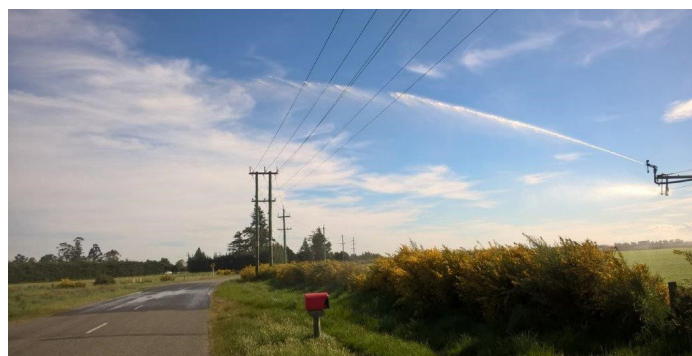
Mind That Spray!

With irrigation season well underway it is an opportune time to remind all irrigators to be aware of where their water is going and irrigate the grass, not the road.

ECan officers have responded to a number of complaints received within the Ashburton area and have been issuing spot fines.

Irrigation spray on roads is a breach of our resource consent, can create significant safety issues and damage to the road surface and creates negative impressions across the wider community.

Our team will call if they see any instances and please let us know how else we can support you to avoid watering the road.



Our People

William Dench - Hydrologist

William joined MHV Water as a Hydrologist in late 2017.

Prior to his employment with the scheme, William completed his masters thesis on the Mayfield Hinds Irrigation Scheme where he looked at the regional changes in groundwater quality and quantity resulting from the conversion of border-dyke to spray type irrigation.

As a Hydrologist at MHV Water, William conducts groundwater quality monitoring, hydraulic testing to identify sites appropriate for managed aquifer recharge (MAR), and acts as a researcher for the scheme.

The current research project has William working with GNS to determine the age of groundwater throughout the catchment, and identify the origins of nitrogen as a contaminant.

William grew up and lives in Christchurch. He has a background in geology and environmental science, with previous roles in environmental monitoring where he worked in Perth. He is an avid touch player, triathlete and news fiend.



William Dench, Hydrologist

Irrigo Environmental Team

MHV is a shareholder of Irrigo, which is a collective of collectives working for your benefit.

This is a great way for us to benefit from a large team with a variety of skillsets. The Irrigo team are highly experienced and a great extension to the MHV Team.



Irrigo Environmental Team

From left to right

Eva Harris
Environmental Manager
027 550 0129
eva@irrigo.co.nz

Belinda Meares
Environmental Coordinator
027 551 0344
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Claudia Thomas
Environmental Coordinator
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Nicole Matheson
Nutrient Management Advisor
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Our Scheme

Automation of Open Races

The fair and equitable delivery of water to all Shareholders is a key undertaking for MHV Water.

Within our piped infrastructure we have the telemetry to deliver water equitably, however, in our open race network it is far more challenging. With over 320km of open races, the vast majority of offtakes being manual gates, regular changes in velocity and head in the races, and a network of on farm ponds, we have considerable challenges to being able to guarantee equitable delivery and we have agreed that is not acceptable in the current environment.

In March 2018 the Board approved an automation trial of Laterals 1 and 5 which also included some remote and M.Bovis related gates. This trial provided us with accurate delivery of water, a saving in Scheme Operator time, a saving in fuel and kilometres travelled, an ability to be more responsive to change and importantly the ability to measure race losses (or unmanaged aquifer recharge) with far more accuracy.

As a result of the trial we have decided to fully automate all of the open race offtakes.

The proposal and schedule are currently being developed which includes pond sensors on farm ponds and shareholders having access to real time flows. Having pond sensors would mean we can better manage delivery to maximise storage volumes on farm to effectively unlock additional on farm storage for all open race shareholders. Whilst this investment will mean any future review of piping will now be at least 5-10 years away, it recognises the considerable short-medium term benefits which offset the investment and provides many of the benefits of piping without the cost.

As part of the schedule we are looking at a two year implementation to achieve Total Channel Control (TCC), over which period we will engage with Shareholders for the best way to 'distribute' any water identified as part of the programme, this will be a shareholder driven decision.

If you are on the MH Open race and do not want an MHV Pond Sensor and telemetry on your pond, or you have any queries, it is important that you speak with Mel at your earliest convenience.

This is a project that will provide us with the ability to efficiently, effectively and it will importantly enable equitable delivery of our shareholders' water, and still maintain one of our most important assets – a low water price. This project can be funded over a short duration from our existing MH Open Race charges.

As above, if you have any queries please contact Mel.

Maintaining Banks of Open Races

To ensure the efficient delivery of water, it is essential that the integrity of our open races be upheld.

Damage to race banks can have repercussions on the effectiveness of the race system and we remind shareholders that:

- Banks may be grazed as long as there is no pugging and there is no feeding out of supplement feed within the easement. At all times, the operations team has final decision and it is expected that stock will be removed or numbers reduced, should staff request this;
- Any works within the easement are to be approved;
- If fencing, please consult your scheme operator and ensure that access to the easement is maintained at all times for spraying and maintenance;
- All tree trimmings are to be removed from the easement to avoid entering the water way.



Fencing of Open Races around Houses

Any amount of water represents a potential hazard, particularly where children are involved.

It only takes a second for a child to drown and we have had 58 preventable toddler drownings in NZ over the last 10 years. MHV encourages shareholders to securely fence all water bodies near houses.

Please ensure that all water hazards are included into farm health and safety plans and clearly identified as hazards in any induction to new employees.

1BT - Funding for planting native and exotic trees

1BT is the Government's plan on how it will reach its goal to plant 1 billion trees (1BT) over the next 10 years.

As well as large scale forestry, this is also a way to incentivise native planting, as the Government recognises there is currently an incentive (carbon) for exotic planting.

The fund is \$238m that needs to be invested over 3 years (from the provincial growth fund) and has been in place for about 3 months now. The main components are:-

- Direct investment – in radiata pine for medium to large scale on private land;
- Grants for natives and some exotics on private land at a smaller scale;
- Partnership could be used for large scale native restoration and requires some co-funding.

For example we could seek a grant under the partnership funding to contract a planting co-ordinator to plan a catchment scale project and/or create a riparian management plan to implement the planning and then seek a grant to partly fund the trees.

There are some rules, but Forestry NZ (Te Uru Rakau) aim to make this as simple as possible.

The minimum width for planting is 30 metres, however for riparian or catchment scale planting, especially native planting, a narrower width may be accepted.

Grants provide a kickstart to support funding and the Trees that Count programme could provide additional funding for any native planting project.

Type of planting	Project size (ha)	Grant (\$/ha)	Top-up available (\$/ha)			ETS Eligible
			Erosion	Fencing	Ecological Restoration	
Indigenous mix	1-300	\$4,000	\$500	up to \$500	up to \$2,000	Yes
Manuka/Kanuka	5-300	\$1,800	\$500	N/A	N/A	Yes
Indigenous natural regeneration	5-300	\$1,000	\$500	up to \$500	N/A	Yes
Exotics	5-300 ¹	\$1,500	\$500	N/A	N/A	All except Radiata pine first 6 years ²

Financial Summary (per hectare)

	Redwood	Manuka	Radiata pine		
	Averaging	Honey/carbon	Safe carbon	Averaging	Permanent
Establishment incl. grant	-\$1,579	-\$357	-\$110	-\$110	-\$110
Thinning cost	-\$800	\$0	-\$800	-\$800	\$0
Total carbon revenue (@\$25/NZU)	\$6,728	\$5,242	\$2,835	\$9,045	\$15,075+
Net harvest revenue (stumpage)	\$42,000		\$36,000	\$36,000	
Honey revenue (@300/ha/year)		\$8,400			
Total revenue	\$48,728	\$13,642	\$38,835	\$45,045	\$15,075
IRR (return on capital invested)	11.1%	26.8%	22.1%	24.3%	23.1%
NPV @ 6.5%	\$3,794	\$3,289	\$6,149	\$7,894	\$3,219
Average annual revenue (undiscounted)	\$1,392	\$505	\$1,438	\$1,668	\$558

NPV is important because it shows the net present value of all discounted future cashflows (excl. the cost of land).

There is an opportunity, if we have sufficient interest, to get a grant to do a catchment feasibility study to review opportunities for both exotic and native planting for both individual farms and also for shared areas.

If you have any questions or are interested in having a further discussion please call Mel on 027 435 6882 or visit www.teururakau.govt.nz

Thanks to Nick Scott at PF Olsen for providing a high level summary of returns – before any Trees that Count funding.

What's happening?



Information Memorandum

Shareholders are reminded that the Information Memorandum closes on **Friday 1 March @ 4pm**.

This share sale is via tender, and further details are available on the [website](#) or the email sent 11 February.

Shed Meetings

As we have discussed on a number of previous occasions, our nutrient discharge consent, CRC183851, will expire in May 2019.

We have been working closely with Ashburton Lyndhurst, BCI and ECan to ensure consistency of our replacement consents which were lodged in April last year and after some additional requests for information they are moving through the application process with ECan.

A draft Environmental Management Strategy (EMS) was submitted as part of our application. This is an evolution of the Environmental Management Plan (EMP) that we had when RDRML held our discharge consent and it outlines the strategy and policies which demonstrate how we will operationally comply with our consent and meet the targets and objectives of the Hinds Plains.

Whilst the conditions of our consent are yet to be confirmed, we would like to get your input into the nutrient allocation and farming change approval policies. We would also like to update you on some important new policies relating to property sales and lease transfers.

Accordingly, we have arranged two shed meetings to discuss this, as well as current and future environmental expectations.

These sessions are to be held as follows and you are welcome to attend whichever is most convenient:

- **Friday 8 March, 1pm at Lagmhor Westerfield Hall**
- **Monday 11 March, 7:30pm at Hinds Community Centre**

We look forward to seeing you there and if you have any questions in the meantime, please feel free to contact Mel.



Vehicles in Races

With approx. 320km of open races we remind you to please be careful around the races.

If you see a vehicle in a race please call your Scheme Operator (once everyone is safe) to manage any possible spills, water flow levels, to aid safe recovery and ensure we are aware of any damage.



Storage Survey

Optimising our MHV infrastructure is a key initiative that we are working through and as part of that optimisation we are investigating the demand for additional storage.

We are aware that some shareholders have sufficient storage and that some do not.

You can help us with our planning by completing our short survey as emailed on 20 February, or click [here](#).

Survey closes 8 March.