

MHVwater Scheme News



Melanie Brooks, Chief Executive

Message from the CEO

In our Christmas Newsletter last year I said I was looking forward to the opportunities and challenges that 2020 would hold, and I suppose in that regard it didn't disappoint!

The year has been dominated by us progressing the renewal of our Land Use and Nutrient Discharge Consent, the progress of which has been significantly impacted by the Essential Freshwater Package and associated Policies and we are expecting a final decision before the end of the first quarter of 2021.

Firstly, it is important to note that many of the objectives included within the Essential Freshwater Package are not dissimilar to the objectives of the Canterbury Land and Water Regional Plan and more specifically those derived as part of our sub-regional planning process (Plan Change 2). We have a robust framework in place which aims to achieve community agreed objectives, and that plan includes a reduction in nitrate leaching of 36% by 2035.

We are, in many ways, fortunate that we have been through the sub-regional process and that we are already on the journey. Achievements to date include:-

- All Shareholders having Farm Environment Plans;
- All Shareholders have had at least 2 audits, and we now have 69% A Audits;
- Stock exclusion of waterways is in place where required;
- Managed Aquifer Recharge and Near River Recharge trials are progressing well;
- Our Groundwater and Surface water monitoring programme is extensive and giving us excellent information;

- We are collaborating with Te Rūnanga o Arowhenua;
- Large investments made on farm for water use efficiency;
- Successful soil conservation on irrigated land;
- Wide uptake of technology to support good decision making for applications of fertiliser and water; and
- Biodiversity plantings are increasing across the district.

Many parts of the Essential Freshwater Package have already been achieved here or are achievable in time, and we are rking closely with the wider community and our local MP, Jo Luxton, on how we can bridge the gaps for the more stretching objectives and we will keep you informed of how that progresses.

Ultimately we must remember that the key is for us to be able to demonstrate an improvement in environmental outcomes so, as we head into the peak of the irrigation season, a reminder of how critical the management and application of water, fertiliser and effluent is. The right amount should be applied, at the right time, every time. Please ensure all of your team are cognisant of this when making decisions on farm.

Lastly, I would like to take this opportunity recognise and thank our team at MHV, the fantastic job they do and the way they do it. I'd also like to wish you and your Whānau a very happy festive season and I look forward to seeing you in 2021.

*Nga Mihi
Mel*

Viewing Pond Levels and Flow Information

Pond levels, flow information and trends can be viewed through your water ordering log in.

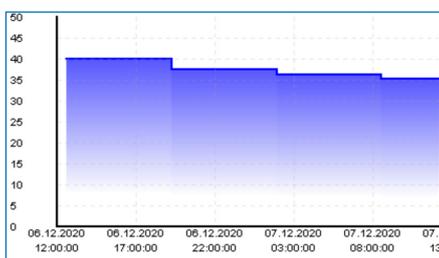
On your water ordering screen, select **Turnout Details** to view your Pond level and your latest flow, in percentages.

| Other Functions |
|------------------------|
| Turnout Details |
| Property Details |
| See Current Flow |
| See Pond Percent |

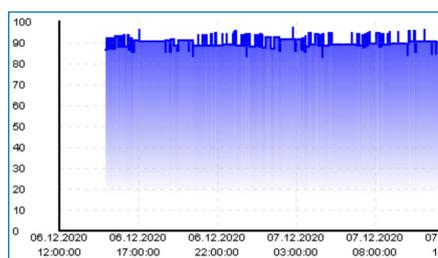
| | |
|---------------------|------------------|
| Pond Percent | 35.46 % |
| Latest Flow | 92.00 L/s |

If you prefer to view the graph, select **See Current Flow**, or **See Pond Percent**.

Pond level percentage graph



Current flow graph



Are you having problems logging in to order your water for your open race property?

Go to www.mhvwater.nz and click on the **Water Ordering** icon.



You will be taken to the login screen where you will be prompted to enter your User Number and Password.

Your **User Number** is your first and last name with no spaces. This can be in upper or lower case i.e. JOEBLOGGS or joebloggs.

Your password is a **4 digit** number.

If you need to reset your password, please contact the office on 03-307-8389 or info@mhvwater.nz

To access the user guides, visit www.mhvwater.nz and click on

[How do I order water online?](#)

Irrigo office Christmas hours and MHV team contacts



The Irrigo Office at 326 Burnett St will be closed from midday Wednesday 23 December 2020 and will re-open on Tuesday 5 January 2021.

The Operations team will be on skeleton staff, running water over the Christmas and New Year period.

For Valetta and Ruapuna, please phone 027 239 5199.

For Laterals 1 & 2, please phone 027 435 6256.

For Main Race and Laterals 3, 4 & 5, please phone 027 435 6252.

We would like to wish you and your family a safe and happy festive season.

Authorised Land Use Policy

Water quality in the Hekaeo/Hinds Catchment has deteriorated over the past 20 years.

MHV Water Ltd (MHV) hold a land use and discharge resource consent CRC183851 to manage the effects of nitrogen loss from shareholder properties and it includes a catchment nitrogen load limit. The catchment nitrogen load limit will decrease over time to comply with reduction targets set by Plan Change 2 of the Land and Water Regional Plan.

In order to ensure the scheme remains on track with meeting catchment water quality outcomes and compliance with their nitrogen discharge consent, MHV Water have developed processes to identify a property's Authorised Land Use (ALU) and how they apply to vary that land use (Farm Activity Variation Application – FAVA) and these are captured in the Authorised Land Use Policy.

The Authorised Land Use will provide a greater degree of certainty for Shareholders detailing the maximum permitted land use parameters including;

- Irrigated area
- Winter grazing area
- Stocking rate

Supplement Use and fertiliser usage will also be documented.

If a Shareholder wishes to increase any of these parameters they will need to seek MHV approval by completing a **Farm Activity Variation Application (FAVA)**.

The **FAVA** must demonstrate;

- The change will not result in an increase in N losses greater than the Nitrogen Discharge Allowance (NDA);
- The Property is able to meet anticipated reduction targets;
- The Property does not rely on an unauthorised intensification on another property (e.g. move winter grazing somewhere else);The variation does not have a negative impact on a sensitive receiving area ; and
- The proposed variation aligns with the schemes overall objectives, including continuous improvement.

The Irrigo Environmental team is working on our behalf to compile Authorised Land Use documents for all properties receiving MHV water. This information is a culmination of information provided by shareholders/managers to the scheme through previous FEP updates and Nutrient Budgets. We anticipate that this will be a lengthy process, with an estimated completion date of December 2021.

In the meantime, if you are considering selling your property, but have not received your Authorised Land Use, please contact us. We will prioritise providing you this information.



At present MHV is seeking a renewal of the scheme land use and nutrient discharge consent CRC183851. The Policy seeks to cover potential future requirements, but may need to be amended to reflect changes in consent conditions.

Introducing Evelyn Murray

Wanting to make a practical contribution to New Zealand's Environment, with a vision for the future of water sparked Evelyn Murray's interest to learn more about irrigation schemes and what they do.

MHV Water have appointed their first intern, Evelyn Murray, to the role which was established in partnership with Ngai Tahu and aims to share knowledge and provide youth with work experience and an opportunity to learn about the extent of opportunities available in the industry.



Mel Brooks, CEO of MHV Water is excited about the new role.

“Irrigation Schemes once manually delivered water to the gate and that was the extent of their operations. Today we manage water delivery integrated with storage and automated infrastructure, have a comprehensive Surface Water and Groundwater Quality Monitoring Programme, work closely with our

farmer Shareholders to support on farm change to drive improved environmental outcomes and manage environmental compliance. We're really well placed to provide an overview to rangatahi (youth) who are considering careers in our industry.”

“Education is an important part of MHV's principles as we all continue to learn in a changing environment, so we are grateful to have Evelyn onboard.”

Evelyn recently graduated Lincoln University with a Bachelor of Environment and Society.

She said she decided to take on this role as it was a great opportunity to get real-life experience in the environmental/water management sector.

“I am looking forward to the whole experience, getting a full overview of

what MHV does, learning new skills, incorporating Te Ao Māori into the workplace and getting my hands dirty out in the field. I want to be a kaitiaki of the land and enhance and protect our natural resources for current and future generations.”

Initially Evelyn has been working closely with MHV's Senior Hydrologist Justin Legg, undertaking groundwater sampling as part of MHV's groundwater program. This involves sampling of approximately 100 sites to obtain water samples and testing for nitrate, dissolved oxygen, conductivity, and pH. Evelyn will also spend time across the wider business and interact with stakeholders of the Hekeao Hinds Plains.

When it comes to Evelyn's perspective on focusing on freshwater management Evelyn said it was crucial as it determined the future of farming.

“Irrigation allows for consistent growth which creates reliable food supplies. As a nation known for our meat and milk products, we rely heavily on having plentiful water for irrigation to support our economy and feed the world. What I see important for sustainable future use is continuing to build that awareness around the state of our waterways, providing good reliable data and information to our communities, and to strengthen that relationship with freshwater through Mātauranga Māori.”

The intern role goes through until March 2021.

Managed Aquifer Recharge effective but still lots of work to do

The Managed Aquifer Recharge Project (MAR) is proving to be one of the many important tools to continuing to improve water quality in the Hekeao Hinds.

MHV manages the operational delivery of water to the sites, supports strategically and is one of the founding partners of the project which began in 2016 with the goal to help reduce nitrate levels in water in the Hekeao Hinds Catchment.

MHV is focused on how we can positively impact on groundwater quality and lowland streams and drains. There is no silver bullet. We are proud that our farmers are making significant on farm changes and those changes are supported off farm with a number of initiatives. Managed Aquifer Recharge is an important one of those initiatives. Aquifer recharge happens both naturally and artificially every minute of every day and is the reason

aquifers and spring-fed waterways exist. Recharge from rainfall, rivers, unlined water races and canals, and irrigation activities all act to continually recharge groundwater.

These kinds of recharge lead to increases in water levels and act to influence the quality of water in the aquifer. The MAR project is based on the recharge that occurs naturally, introducing a purposeful recharge of specifically clean water into an aquifer to both rehabilitate and enhance the natural processes.

The Lagmhor Pilot Site was the first to be constructed, with a further 17 sites constructed since. An extensive application process was undertaken to secure a Primary Growth Fund grant of \$950,000 which has supported continuation of the trial and the Hekeao Hinds Water Enhancement Trust (HHWET) has been formalised to oversee the trial.

The new lateral infiltration MAR site near Lennys Road has seen 260,000 cubic metres of water recharged since October 27, 2020, with over 4.5 million cubic metres of water restored since 2018 across all sites.

With four MAR sites near the Hekeao Hinds River an additional benefit has been improvements in flowing reach and fish abundance downstream from the Upper Hinds Near River Recharge site and creation of flowing reach downstream from the Mid-Hinds Near River Recharge site.

Meaningful improvements in groundwater quality have also been achieved downstream of MAR Sites with data collection and analysis continuing to inform the future sites both in terms of their construction and location.

More information on the Managed Aquifer Recharge Trial can be found at www.hhwet.org.nz

Below: MAR site on Lennys Road



Biodiversity Planting



Agricultural development, particularly the installation of centre pivots, has seen a marked reduction in biodiversity across the Hekeao Hinds Plains as shelter belts and trees have been removed.

As our awareness of the importance of biodiversity across the Plains becomes more focused we are seeing Shareholders initiating extensive planting projects and if you have been driving along the Maronan Ealing Road recently you may have noticed the newest native plantings in the scheme.

Since investing in irrigation efficiency and introducing pivots to their property Garry and Nicky Brown have struggled to see where they could plant trees to replace those that were removed.

The composition of the farm meant there were few non-productive areas that could be retired for trees and shrubs.

The Browns engaged Stephen Brailsford and Angela Cushnie to support with finding the best location and the right mix of species for their property. After considerable consultation they kept coming back to the area along the MHV water race primarily because it was already fenced and underutilised. This year they approached the scheme to see if we would facilitate a trial exemption to the existing Policy.

Planting along water races has long been discouraged/prohibited because of the consequences of debris in the water and root masses potentially undermining the stability

and/or integrity of the races. The reasoning behind the Policy remains valid, as such we sought to work with the Browns to identify a mix of plant species that would achieve the desired dryland bio-diversity as well as minimise any impacts to the operation of the scheme.

As a result Garry and Nicky have now planted approximately 3,000 native plants along 2.5km of MHV water race. The trial will go for a period 5 years to allow the trees to mature and so that we can monitor any potential impacts.

We would like to recognise the pro-activity of Garry and Nicky in undertaking this project and bringing the opportunity to MHV and we will keep the wider scheme informed of the progress.