Media Statement
14 July 2022

Largest independent water monitoring programme in Aotearoa increasing understanding of nitrate behaviour

MHV has been monitoring nitrate concentrations in both ground and surface waters across the Hekeao Hinds Catchment of Mid Canterbury since September 2016. The programme has evolved and in 2021, with support from Hekeao Hinds Water Enhancement Trust (HHWET) and BCI Irrigation, approx. 150 bores and 40 surface water sites representing an area of 1060 km^2 were tested regularly.

In addition to the regular sampling the unprecedented rain event in June 2021 brought an invaluable opportunity to understand the migration and retention of nitrate-nitrogen (NO_3-N) levels in freshwater across the Hekeao Hinds Catchment.

At the conclusion of 2021, the results obtained indicated:

- a clear relationship between soil type, shallow groundwater, and rainfall,
- changes in nitrate concentrations across the catchment were variable both spatially and temporally after the rain, and,
- localised increases in NO_3-N concentrations were short lived.

MHV Senior Hydrogeologist, Justin Legg, says these key drivers of nitrate migration and retention, as well as similar observations in previous external reviewed studies has enabled MHV to develop a robust theory model displaying potential mitigation strategies.

“Based on this information, the Hekeao Hinds community are now in a position to better understand where, how and why nitrate levels in groundwater change after a rain event.”

MHV is collaborating with The Hinds Drains Working Party, HHWET, the Mid Canterbury Catchment Collective, Te Rūnanga o Arowhenua, Environment Canterbury, the Universities of Otago and Auckland, DairyNZ, Aqualinc Research and, NIWA to develop research and education opportunities, and deliver science that is relevant to farmers.

See the full report here.

ENDS

**MHV Water is a farmer co-operative with a mission statement of Sustainable Solutions for our community, now and into the future. MHV owns and manages the water delivery infrastructure and environmental compliance for 206 farmer shareholders across an area of approx. 58,000 hectares on the plains between the Ashburton and Rangitata Rivers.*