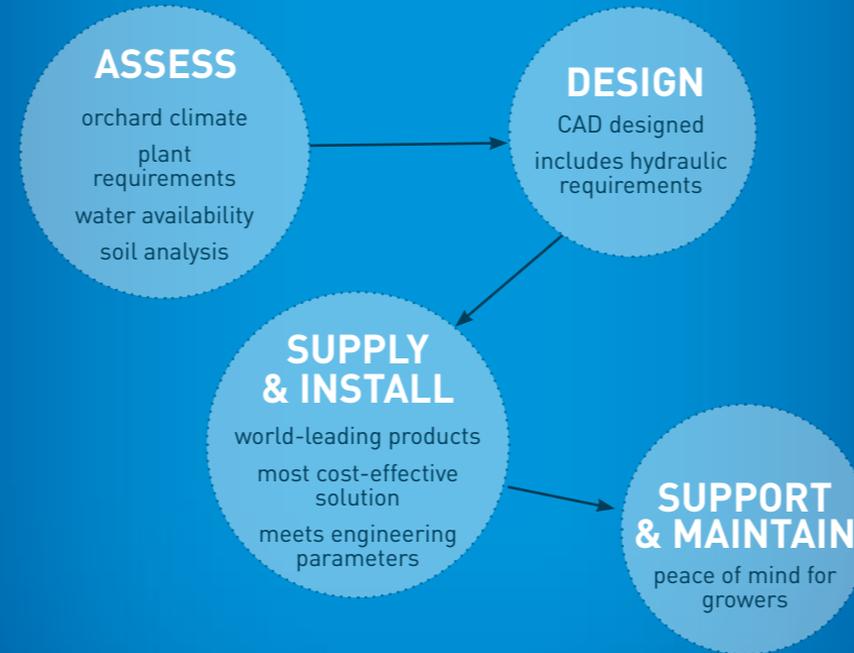


GIVE FROST THE COLD SHOULDER.



OUR PROCESS

- ✓ Fit for purpose solutions
- ✓ Sound hydro-engineering principles
- ✓ Experienced and qualified employees



IRRIGATION SERVICES INTEGRATED TURNKEY SOLUTIONS

At Irrigation Services, our depth of knowledge and experience is hard to beat.

We have vast frost protection and irrigation experience, particularly in the frost-prone Hawke's Bay and Central Otago areas.

In 2003, when the first comprehensive frost research in New Zealand-specific conditions was undertaken, Irrigation Services designed, installed and managed the trial, and were responsible for data retrieval along the way.

We are New Zealand's leaders in drip and micro-sprinkler irrigation and frost protection systems using overhead water sprinklers for orchards and vineyards. We deliver quality results – on time and within budget.

“Irrigation Services designed and built the state-of-the-art system for our 40ha Kiwifruit orchard. We have been very satisfied with their design, and willingness to travel to site in emergency situations. I can confidently recommend them for irrigation, dam building and steel construction work.”

Russell West, Kiwifruit Grower

**IRRIGATION
SERVICES**

Call Mike Connor on:
027 215 8769
or call the office on: 06 870 0658
frost@irrigationservices.co.nz

**IRRIGATION
SERVICES**

Frost Protection | Irrigation | Dams



“ Being burnt by a frost is the single biggest risk we have to our Zespri Gold Kiwifruit. Using Irrigation Services for the design and installation gives me peace of mind. ”

John Ericksen

WE KNOW FROST.

We know it's a significant challenge for Kiwifruit growers and we know its potential to severely damage your profits.

Correct and personalised design and management of your frost protection solution is crucial – a poorly designed overhead scheme can put your income at risk.

We will:

- Determine the specifics of local weather data relating to your orchard.
- Assess the frost risk from this data.
- Identify the critical temperature of your crop, at which frost damage occurs.
- Maximize existing resources for frost protection.
- Evaluate the volume of water required to protect your fruit per frost.

FROST PROTECTION - IT'S A SCIENCE

For New Zealand frosts, overhead frost protection is the most reliable solution.

Overhead systems cover the vines with water, which freezes and encapsulates susceptible tissue in ice. The plant tissue is effectively insulated from the severity of the frost by the ice.

Under-vine sprinklers are also worth considering for frost risk reduction. Sprinklers on the ground reduce the heat loss by radiation from the ground surface, maintaining a higher temperature over the protected area.

Sound engineering, design and installation is critical, with the effectiveness of protection depending on the water application rate and uniformity.



We can assess and monitor the following factors to optimise the performance of your frost protection system:

- Air movement
- Sprinkler alignment
- Startup temperature
- Dew point temperature
- Water volume calculation is vital
- Losses due to radiation, convection, and evaporation



DAMS - PART OF THE SOLUTION

Water supply is an integral part of frost protection – if you run out of water your frost protection solution is vulnerable and your whole income is at stake! Dam water storage is an ideal solution and also integral part of our business – we are specialists in hydraulic design and installation.

We offer an end-to-end solution:

- Calculate hydraulic requirements
- Engineer, build and line your dam
- Assist with resource consent
- Maintain your dam

Irrigation – a key component

Irrigation is not just about delivering product to orchards – it is a whole package specific to each orchard. We select the best product for the job, addressing features such as:

- Constant flow
- Anti-insect
- Under tree applications
- Multi-purpose for cooling and frost protection
- Variable flow-rates and distribution patterns
- Uniformity of irrigation and fertigation
- Anti-clogging properties

