

REMOTE PUMP MONITORING AND CONTROL

Remote Pump Monitoring and Control for Murray–Darling Irrigation

1. The Challenge

Across Australia's Murray–Darling Basin, irrigation pumps are often located many kilometres from the farm. Operators regularly spend hours driving simply to check that pumps are running correctly, adjust water flow, or investigate faults.

When problems such as cavitation, blocked inlets or engine faults go unnoticed, the result can be expensive engine damage, lost irrigation time and reduced crop yields. Farmers also need to carefully manage water allocations, making accurate flow control essential.



2. The Solution

Working together, [Macquarrie Corporation](#) and [McGregor Diesel](#) developed a remote monitoring and control solution that allows farmers to manage pumps from anywhere.

Senquip telemetry monitors engine performance, fuel level and consumption, water flow and pressure while edge algorithms detect developing issues such as excessive vibration and cavitation before major damage occurs.

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The system also enables authorised operators to remotely start and stop pumps, adjust engine speed to control water flow, and receive real-time alerts when maintenance is required.

Macquarrie Corporation developed the application-specific programming and integration, while McGregor Diesel carried out the on-site installations and commissioning.



3. The Results

The solution has delivered significant operational benefits, including:

- Hundreds of hours of travel saved each season.
- Early detection of engine and pump faults, reducing costly failures.
- Improved pump efficiency through continuous monitoring and optimisation.
- Better management of water allocations through accurate remote flow control.
- Remote diagnostics that allow service technicians to identify many issues before travelling to site.

For many irrigators, pumps have changed from isolated field equipment into connected assets that can be monitored, controlled and optimised from virtually anywhere.