



# HydroTerra

Environmental Monitoring Specialists

Integrated  
Monitoring  
System Design

## The Mulloon Institute - Integrated Monitoring System Design



One sector that aligns well with our capabilities is monitoring to improve natural resource management, which, in many instances, involves working with research institutes. Research organisations are a pleasure to work with; the staff are typically passionate, highly knowledgeable in their specific fields and willing to embrace the benefits of technology. The Mulloon Institute (TMI) is no exception.

The Mulloon Institute is an Australian research, education and advocacy not-for-profit organisation. Their vision involves 'connecting environment, farming and society through practical demonstration'. Through their extensive and impressive work, they are leading the regeneration of 100 landscapes in 10 years - regenerating 2.5 million hectares of land, restoring 1.25 million ML of water to Australian floodplains and 1,250 hectares of highly fertile floodplains, plus repairing and protecting 1000 km of degraded creeks and river banks from further erosion.

One of TMI's research projects is the Mulloon Rehydration Initiative (MRI). HydroTerra was engaged by TMI to develop a monitoring strategy and assist with the turnkey implementation of the specified system.

The outcome was a research site with a monitoring program capable of producing trusted data of known provenance for catchment health and productivity.



### The Project

The network consists of two climate stations, 80 automated piezometers, 5 stream gauging and water quality stations and 40 soil moisture monitoring sites. In addition, remote sensing of vegetation health, RARC assessments of stream health and a range of ecological assessments are conducted and their data incorporated.

The intention is for this to be a long-term research site delivering information and data for collaborative research into sustainable agriculture. It's been a fascinating project so far and one that has provided some insights into what true best practice looks like for environmental monitoring for natural resource management.

We look forward to continuing this fruitful partnership with The Mulloon Institute and are excited to see the insights and benefits to come.

The key was establishing TMI's indicators of catchment health and productivity, then documenting the requisite parameters required to calculate these indicators. Once this was nailed down, we were able to:

- Develop monitoring methods
- Evaluate technologies
- Optimise technology integration
- Document data management flows
- Establish a comprehensive metadata framework to ensure data provenance
- Achieve remote oversight through appropriate hardware and software selection
- Use third-party publishing mechanisms to streamline data publishing approaches.

HydroTerra's team includes experience, qualified environmental scientists, hydrogeologists and electrical engineers.

To learn more:

Visit [www.hydroterra.com.au](http://www.hydroterra.com.au) for more information about our wide-ranging services or contact the team directly:

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