

Remote monitoring of water usage

Location: Darke Peak and Mullaquana Station, South Australia

Region: Eyre Peninsula NRM region

Industry: Agriculture, Grazing

Topic: Using water sensing technology to remotely monitor water sources over large distances

Key Outcomes: Installing a Leak Detection Unit has given

Brenton Jones multiple benefits including:

- Significant water savings
- System allows detection within 24 hours of above normal water consumption
- Continual recording allows vital history of water use
- Daily water usage alerts via SMS and email
- Online water use graphs—hourly, daily, weekly
- Ability to track water usage and stock movements
- Low maintenance and low ongoing costs.

Background

Brenton Jones and his family farms two properties; 2400 ha at Darke Peak running 2400 merinos with an annual rainfall of 340mm and 13,000+ ha at Mullaquana Station, approx. 180km away, running 5,000 merinos with a 250mm annual rainfall.

While Brenton's water infrastructure is in good condition, he says that he spends so much time chasing water leaks that it's nearly a full time position for his properties which are over 180km apart.



Two properties over 180 km apart



Brenton Jones checking his Leak Detection Unit at Darke Peak.

Mr Jones said *"The cost of water plays a large part in the budget of mixed farming enterprises when water usage is not monitored. This results in water wastage and high water bills."*

Aging infrastructure and the fluctuation of mains water pressure are the main cause of leaks and with the increasing time demands on farmers, monitoring of mains water meters and chasing leaks becomes a tedious exercise.



The project

Brenton heard about Leak Detection Units (LDU) but wanted to know more so made it a priority to attend the 'Water Use on Farm' day at Cleve where landholder experience and feedback on using these systems which in turn help him make the decision to purchase three LDU's. Two for Darke Peak and one for Mullaquana Station.

Brenton said "attending the 'water use on farms' forum gave me a better understanding of the technology available to assist with my farming enterprise".

"These devices have saved me many hours of travel in a car and allowed me to undertake other farming duties that were always put lower on the priority list as I was spending so much time in the car"

The systems are simply fitted to SA water meters and continually monitor water flow and usage patterns that then send mobile text messaging of daily water consumption. The units are solar powered.



Outcomes

After the LDU's were installed, Brenton said "This quick and reliable messaging system has allowed me to isolate certain areas on my farm to find the leaks resulting in a reduction time chasing leaks and a reduction in my quarterly water bill by 30% already over the same period last year for both properties. All this while carrying an extra 400 head of sheep over this period".

The system texts messages of total water use and minimum hourly flow for each 24-hour period every morning alerting landholders that they may have a busted pipe.

"These leak detection systems have notified us of both large and small leaks on our properties which are a four hour round trip apart that would sometimes have gone un-noticed for days or weeks at a time, saving us thousands of dollars."



The SA Water meter (blue dot) is over 20 km further north from Mullaquana station.

The future

Brenton's future plans include marrying up the leak detection units to a tank monitoring application across his properties.

He would also like to add more pressure reducers across his property to assist with creating less leakage from fluctuating mains water pressures. The value of using pressure reducers was something Brenton also took away from the 'Water Use on Farms' forum.

