



COMPLIANCE  
MONITORING

## COMPLYLIVE

ComplyLive is Compliance Monitoring's live data application.

The key to ComplyLive is pictorial widgets that are defined in a widget library. Each widget enables data visualisation in customisable ways. This provides the end-user with functions such as:

- latest data values;
- time series charts and graphs;
- remote device control;
- alarms management; and
- displaying static custom html content.



ComplyLive data is available on smartphone, tablet and PC systems.

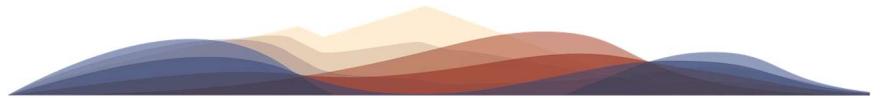
# COMPLIANCE MONITORING NEWS

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## WELCOME

The Perth summer weather is lingering as we enter the Autumn season in Western Australia. For many of our remote resource based clients, cyclones are a feature of summer and although we are now late into the season, they are still forming. Luckily this year cyclones haven't had too much of an impact given the unplanned challenges to our economies and our freedoms of travel that the world has had to face in the past 12 months.



## FEATURES

In this edition we take a closer look at two aspects of environmental monitoring.

### Monitoring the soil in support of weed eradication programs

*Weed eradication programs generally minimise the risks through surveillance, eradication and containment. By generating live soil moisture monitoring data, Compliance Monitoring assists these programs by providing early warning of weed outbreaks.*

### Water monitoring at depth

*Some bores are just plain deep, and Compliance Monitoring is regularly called on to sample down to 160m in remote regions of Western Australia.*

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*Feedback from CM clients, "innovative,  
responsive"*

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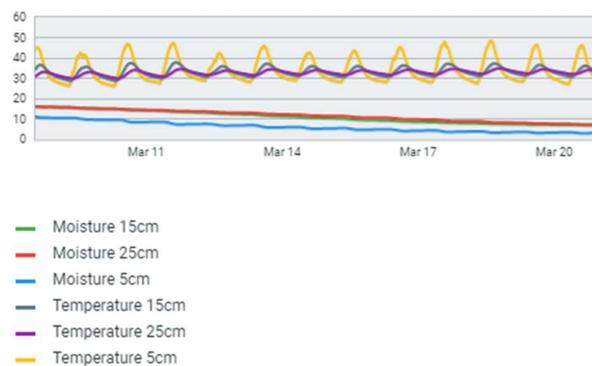
## MONITORING THE SOIL IN SUPPORT OF WEED ERADICATION PROGRAMS

CM was requested to establish a network of soil moisture and rainfall monitoring stations at a remote location in Western Australia. The client wanted to correlate rainfall events and soil moisture levels with outbreaks of invasive weeds.

As rainfall was non uniform in the area a network of 5 stations were initially requested across a 200 km<sup>2</sup> region. The first challenge was to develop a low power communications network as there was minimal cellular data network coverage present. Compliance Monitoring determined that LoRaWAN was found to be suitable. LoRa is a proprietary low-power wide-area network modulation technique.

The monitoring stations were built solar powered and communicate via a base station to a tower with 3G coverage. They have a small footprint, are relocatable and given the potential for coastal region deployment, are robust enough to require minimal maintenance.

The moisture sensors use capacitance based technology to provide near continuous measurements of the soil from 5cm to 25cm below the surface. Soil temperature is also recorded. Time series graphs show the retention/movement of moisture through the profile.



## WATER MONITORING AT DEPTH

Compliance Monitoring is NATA accredited to AS/NZS 5667 for sampling a range of water types – from potable to waste to ground. Groundwater is a special hidden resource that Western Australia relies on. Our natural environment also depends on it, so we need to balance its use carefully.

When potable water is derived from groundwater sources, all pumped boreholes should be sampled to protect the use to which the water is put. In remote areas, the depth to groundwater can be quite high. CM is often requested to monitor bores via slotted screens at depths of 160m.





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### Contact Us

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### Coming up in a future edition

Visual air quality monitoring with live images uploaded to private or public websites.

