

Tintinara Coonalpyn Prescribed Wells Area

Water Allocation Plan review

Resource condition

The Tintinara Coonalpyn Water Allocation Plan is currently under review. Water allocation plans inform monitoring requirements as a mechanism to help understand resource condition and the effectiveness of the Plan in managing the resource.

Resource condition underpins and informs the review process. This overview has been developed to transparently show the current groundwater level monitoring data. This overview is provided for general information purposes only.

Groundwater monitoring data for South Australia is publicly available through WaterConnect and can be accessed at www.waterconnect.sa.gov.au.

Current monitoring

'Current monitoring' refers to the wells that have been monitored for groundwater level in 2025. The data on WaterConnect shows the current groundwater level observation network includes:

- Twenty seven (27) monitoring wells in the unconfined aquifer
- Thirty three (33) monitoring wells in the confined aquifer.

Historical data may also be available for wells. These are publicly available and can be accessed through WaterConnect.

For groundwater levels, monitoring frequency is generally 6 monthly and is usually undertaken twice per year in autumn and spring (winter-recovered level).

These monitoring readings are used for resource condition trend assessments developed by the Department for Environment and Water (DEW), such as the 5 year trends. A missed or unusable reading during the time period will exclude that well from the assessment. The point data is still available for each individual well.

A map of the location, name reference and hydrograph of each of the current groundwater level monitoring observation wells are provided in this summary document. The hydrographs show varying trends in groundwater level over the period of monitoring.

For both the confined and unconfined aquifer the potentiometric surface contour elevations provided are relative to sea level (mAHD). Mapping the potentiometric surface helps identify flow directions and gradients. The resolution and representativeness of potentiometric surface maps is dependent on the number and spatial distribution of monitoring wells. Potentiometric surface maps are indicative only.

Unconfined aquifer

Current groundwater level monitoring observation wells

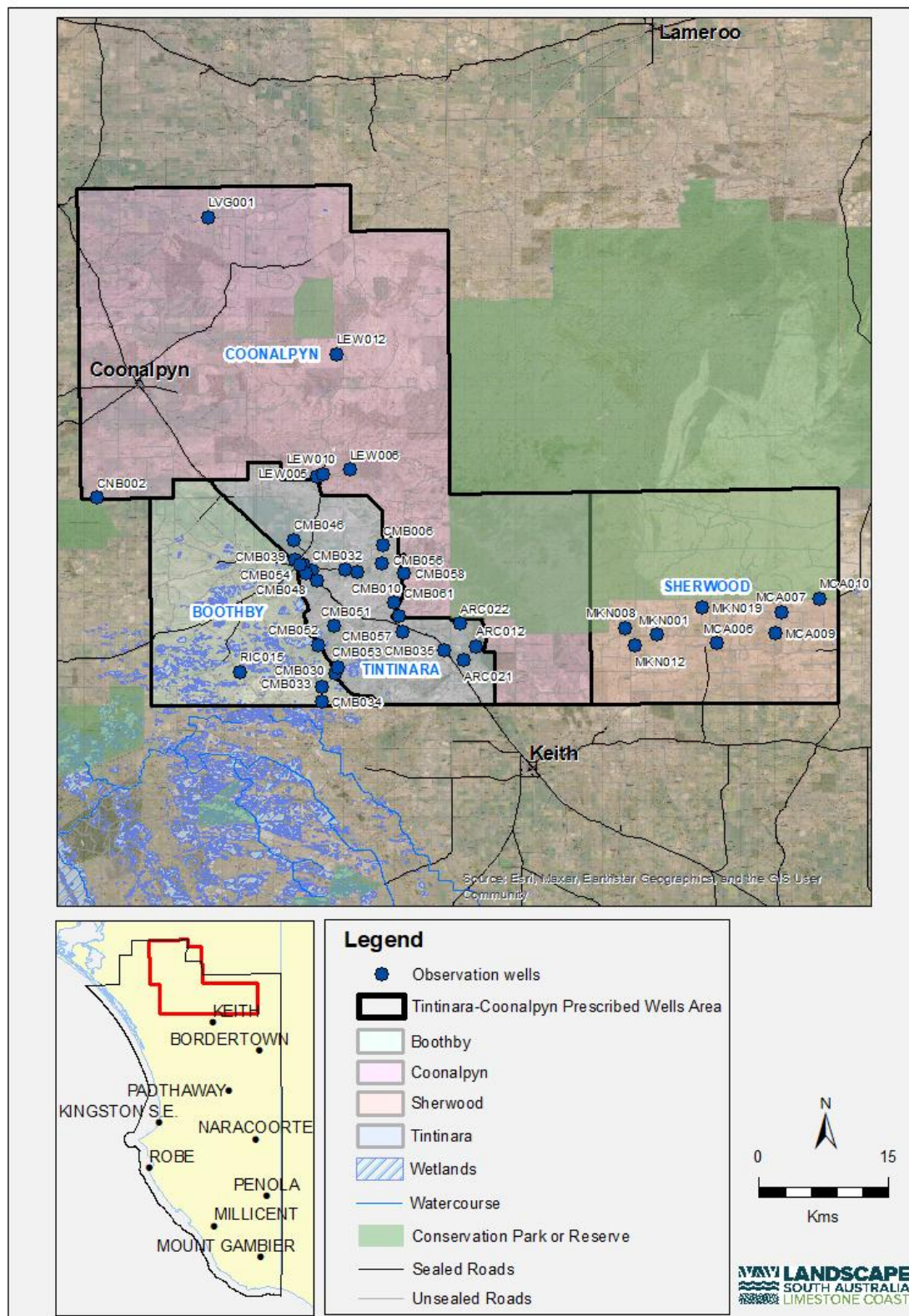


Figure 1: Map of current groundwater level monitoring observation wells in the unconfined aquifer in the Tintinara Coonalpyn PWA

Unconfined aquifer Groundwater level hydrographs

Data sourced from WaterConnect for twenty seven (27) current observation wells for Tintinara Coonalpyn PWA. Data classified as anomalous has been removed. Graphs are shown as rSWL as mAHD.

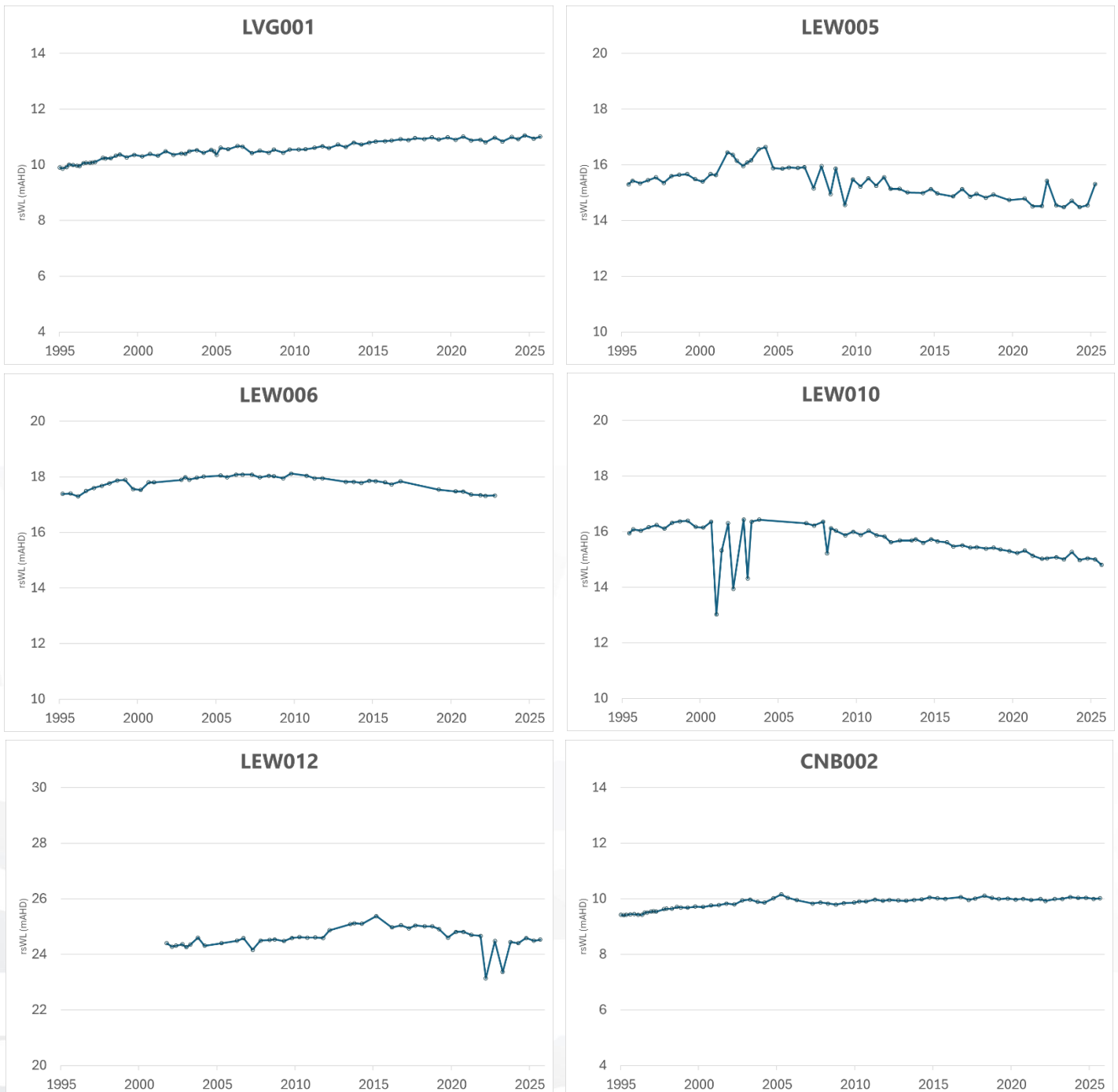
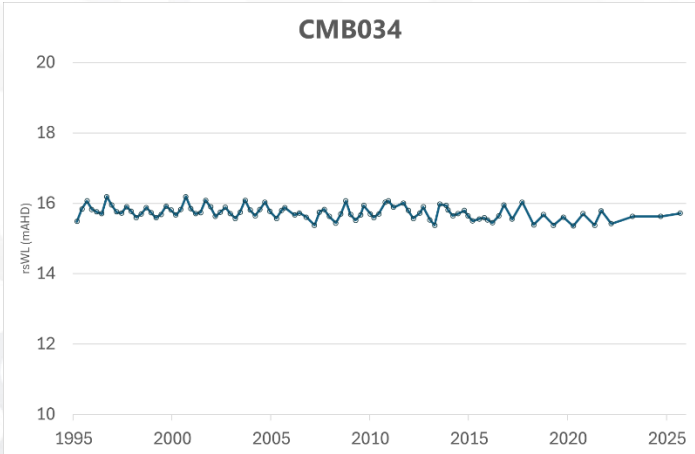
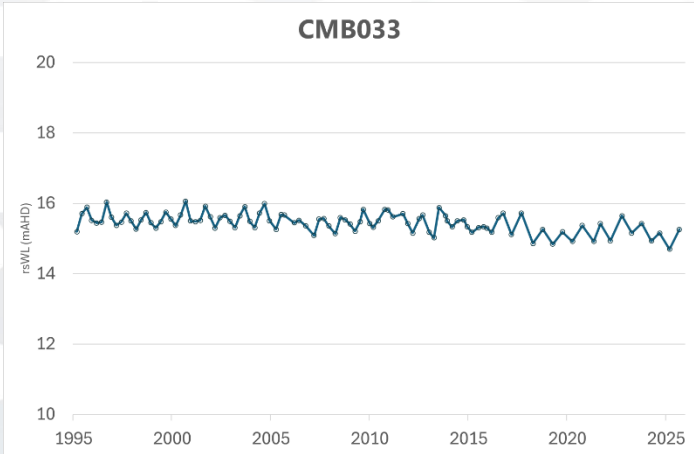
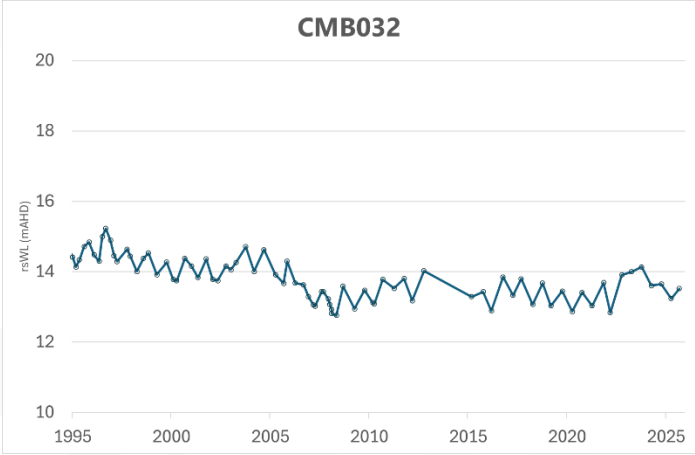
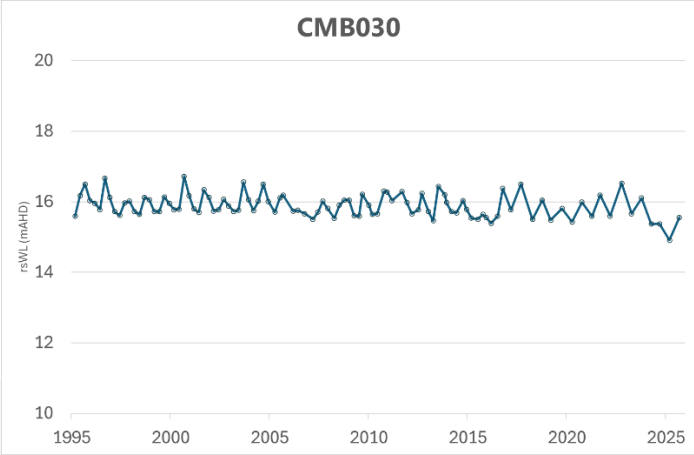
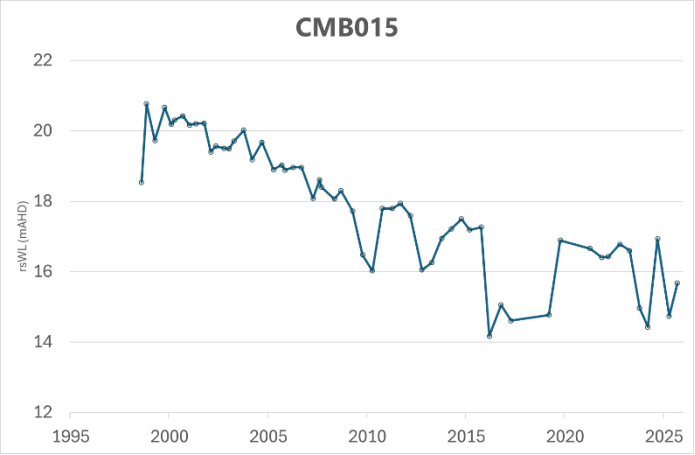
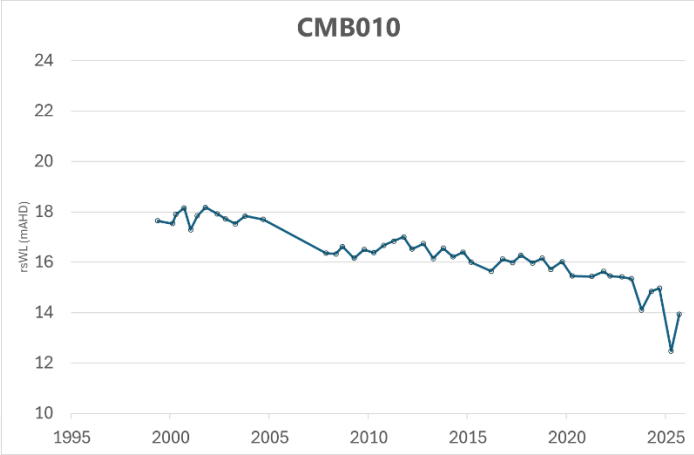
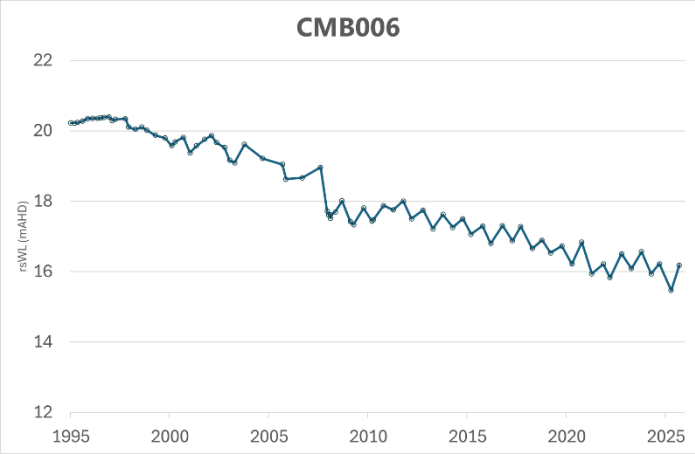
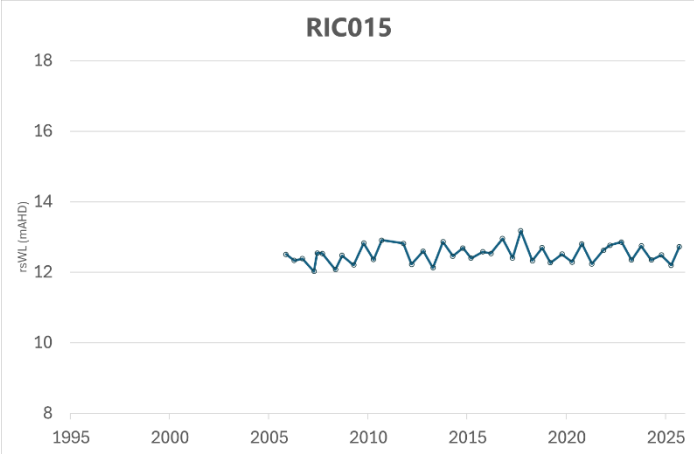
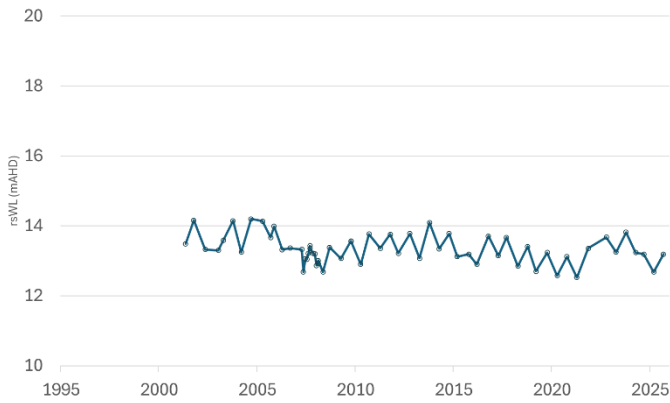


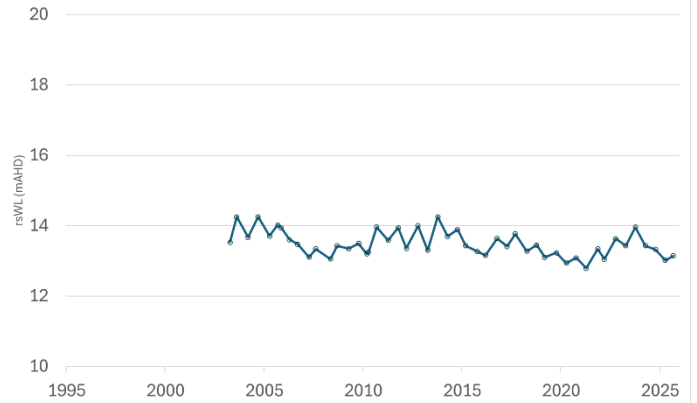
Figure 2: Hydrographs for wells in the unconfined aquifer in the Tintinara Coonalpyn PWA (Hundreds of Livingston (LVG), Lewis (LEW), Coneybeer (CNB), Richards (RIC), Archibald (ARC), Coombe (CMB), Makin (MKN), McCallum (MCA)).



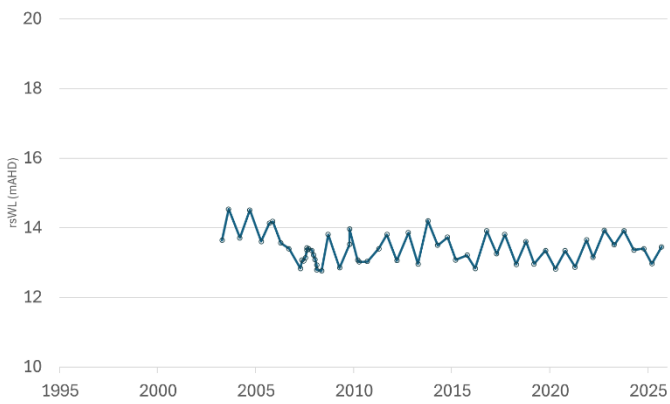
CMB039



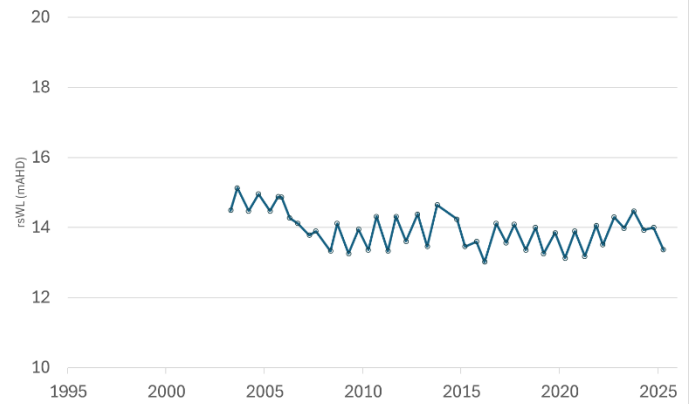
CMB046



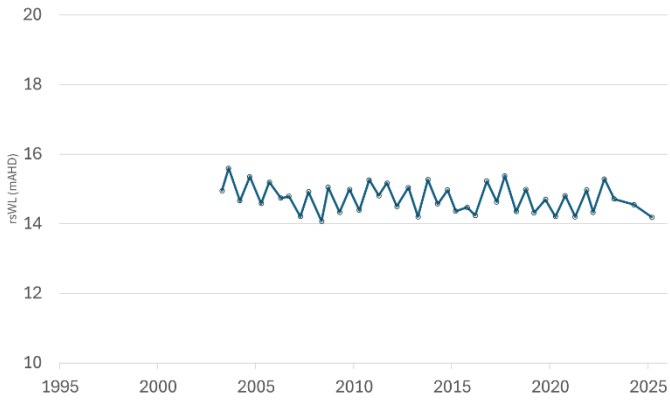
CMB048



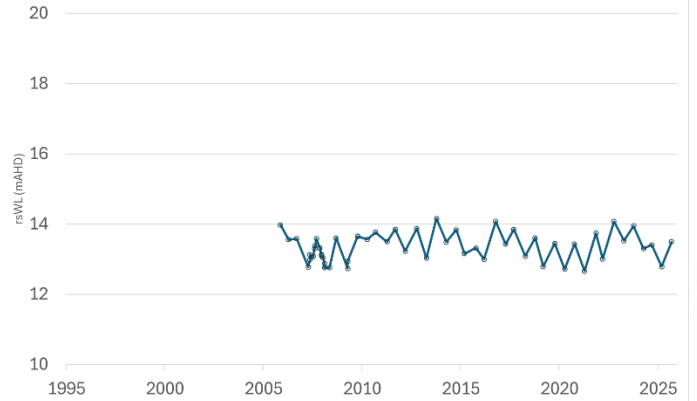
CMB051



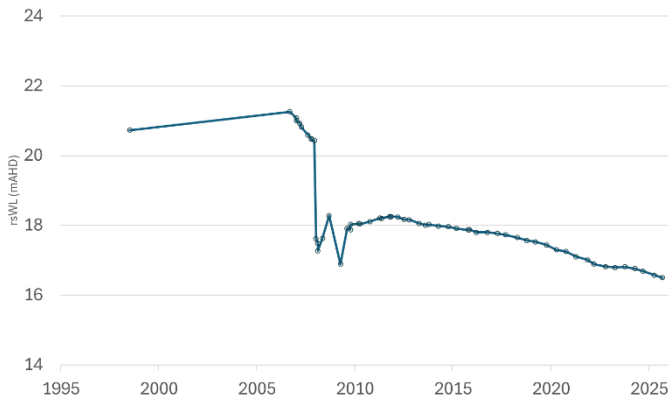
CMB052



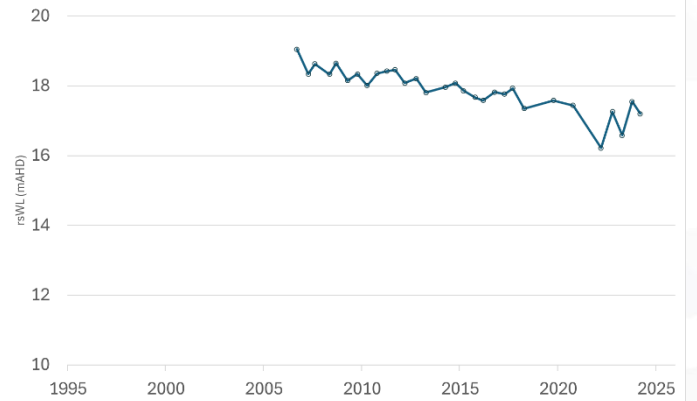
CMB054

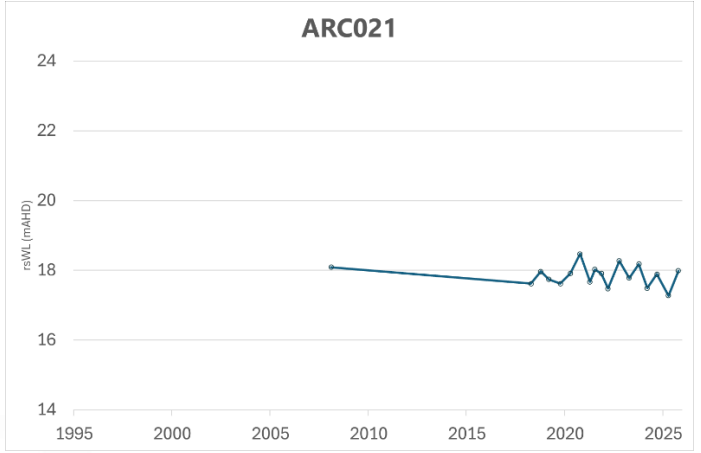
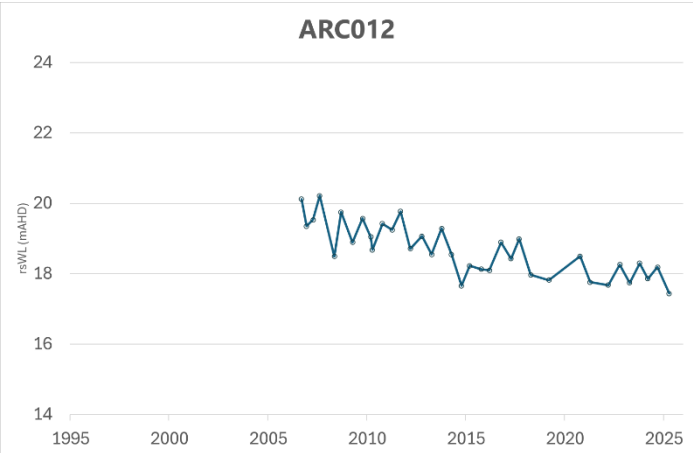
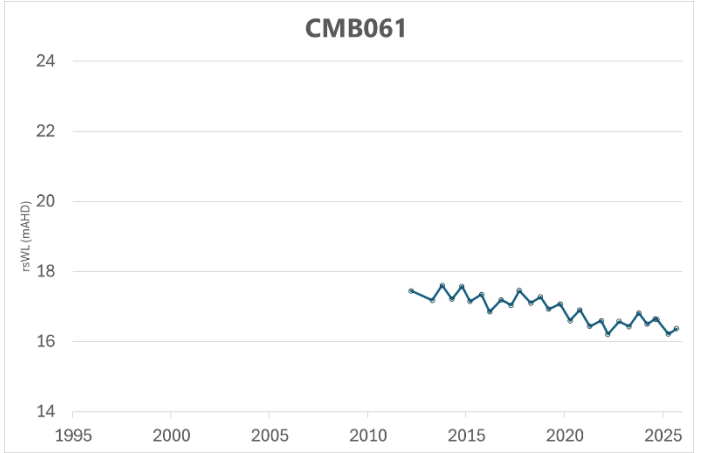
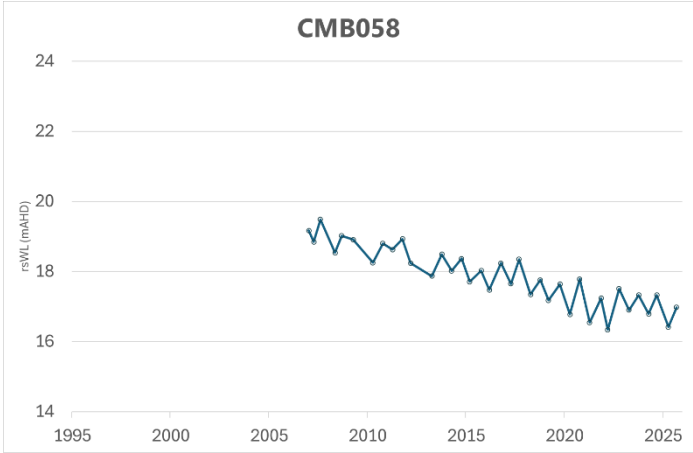


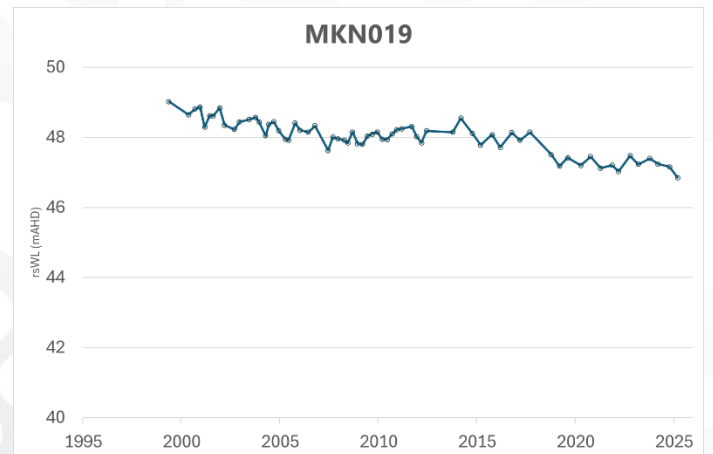
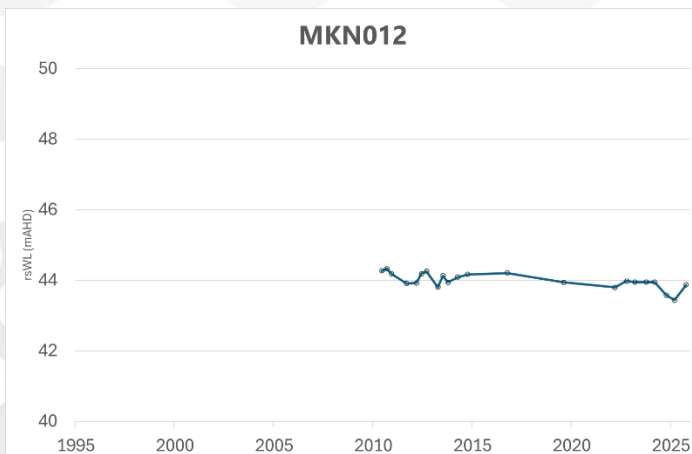
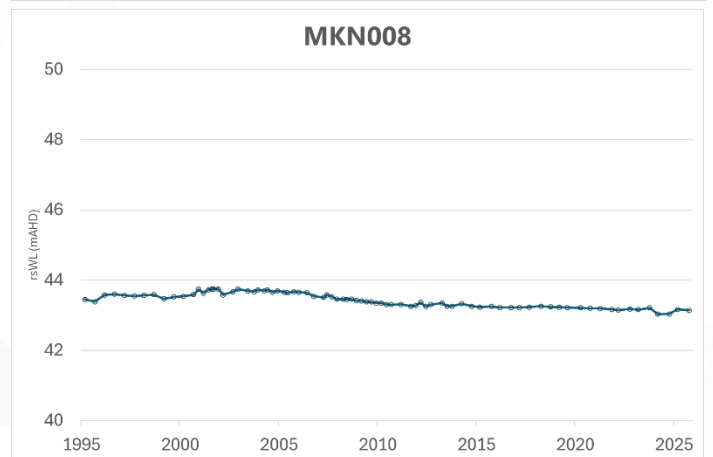
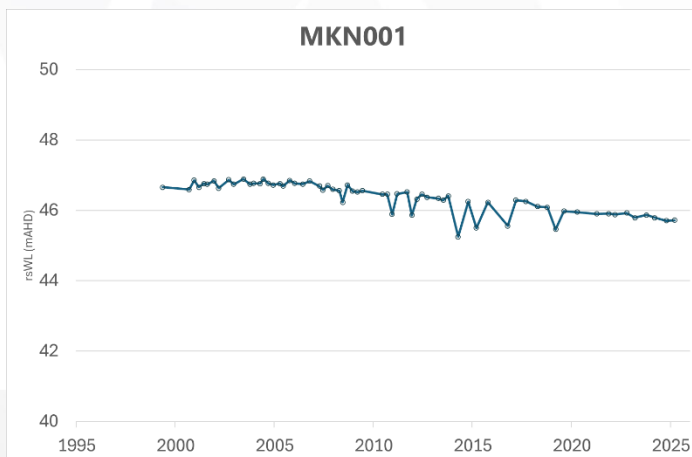
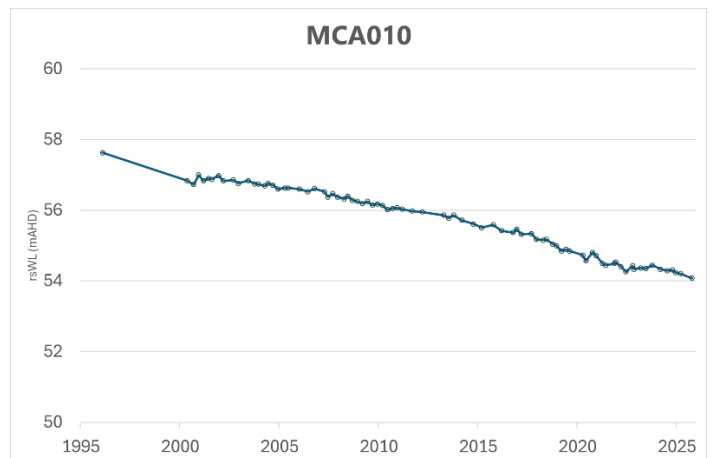
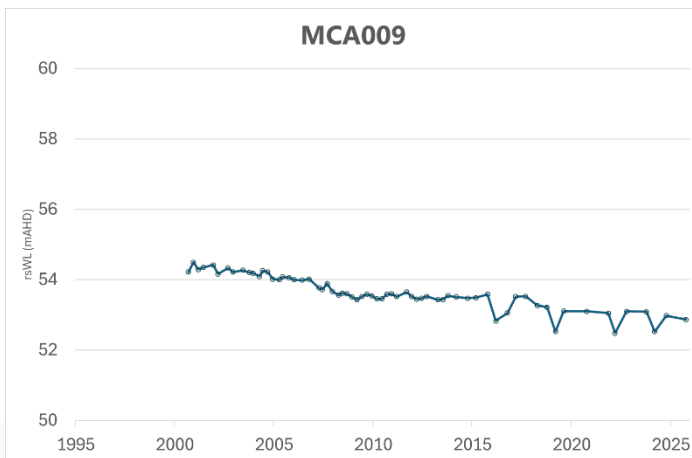
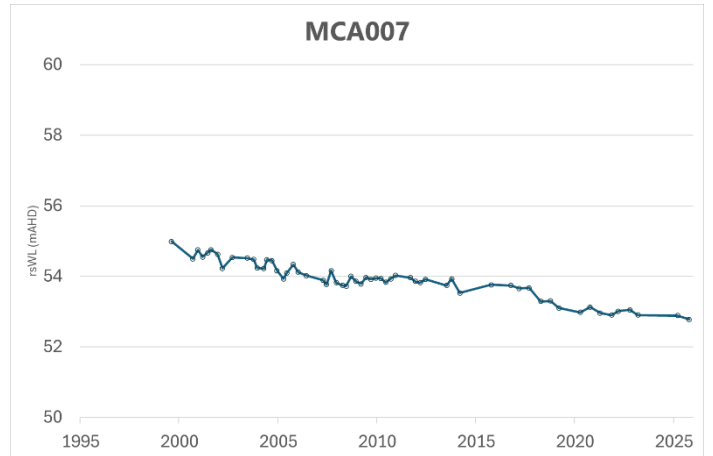
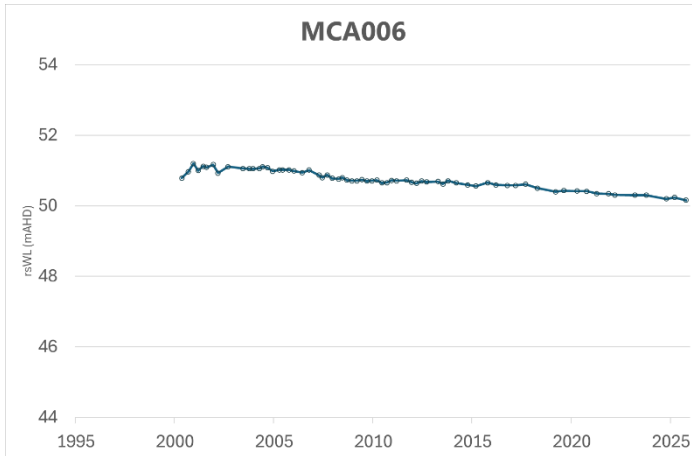
CMB056



CMB057







Tintinara-Coonalpyn RSWL trends (unconfined aquifer)

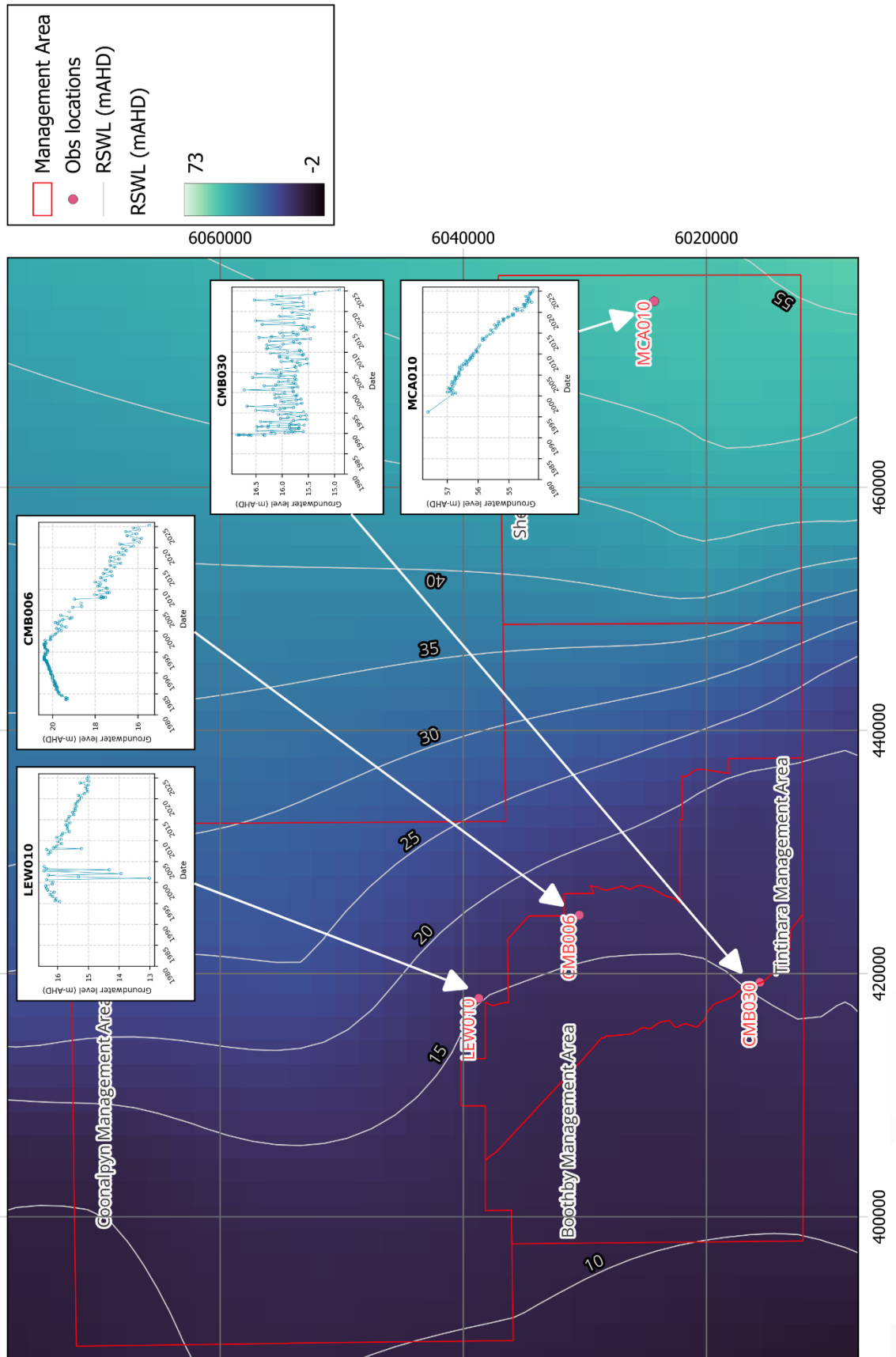


Figure 3: Indicative RSWL contour map for the unconfined aquifer in the Tintinara Coonalpyn PWA (DEW, 2025)

Unconfined aquifer: Coastal Plains

Groundwater management areas: Coonalpyn, Boothby, Tintinara

Water Levels

Five-year trends show declining water levels in 53% of wells, with rates of decline ranging between 0.14-0.03 m/y (median is a decline of 0.08 m/y):

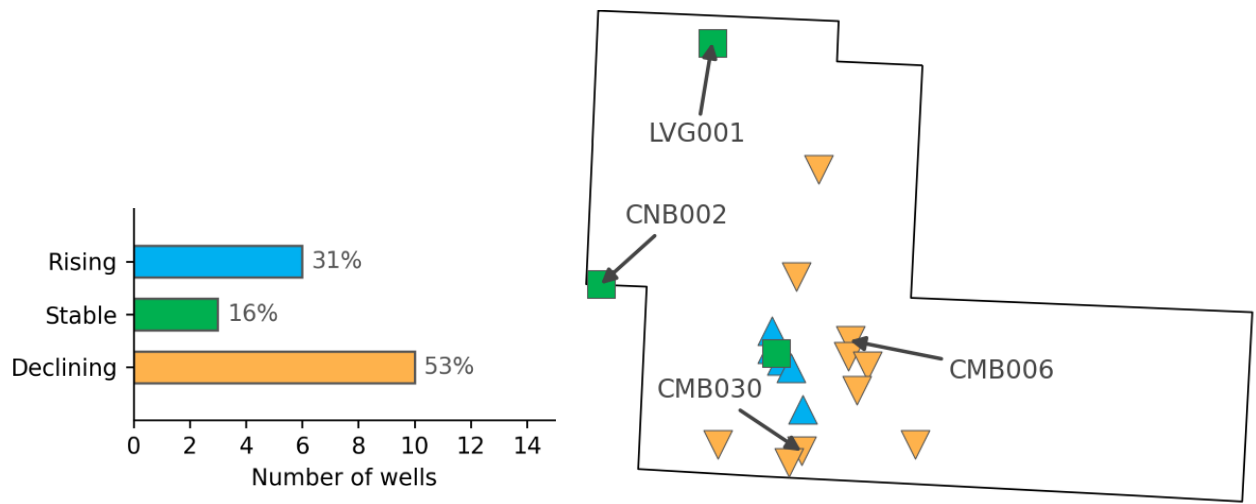


Figure 4: Five year trend to 2024 winter-recovered water levels for wells in the unconfined aquifer in the Plains area of the Tintinara Coonalpyn PWA

Over the past 10 years, variations in water level in 22 wells range from a decline of 1.35 m to a rise of 0.20 m (median is a decline of 0.4 m).

Over the past 20 years, variations in water level in 20 wells range from a decline of 2.75 m to a rise of 0.47 m (median is a decline of 0.6 m).

Over the past 30 years, variations in water level in 9 wells range from a decline of 4.14 m to a rise of 1.05 m (median is a decline of 0.9 m).

Winter recovered water levels

In 2024, winter recovered water levels in 19 out of 22 (86%) of monitoring wells in the unconfined aquifer of the plains in the Tintinara-Coonalpyn PWA are classified as 'Below average' or lower:

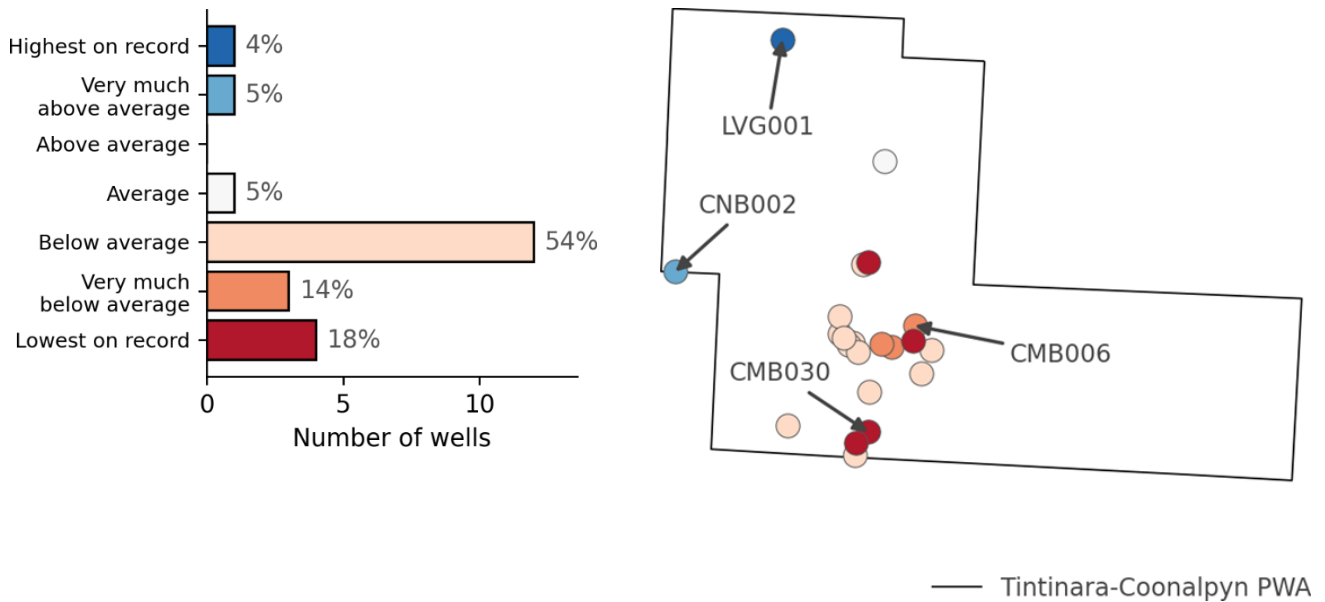


Figure 5: 2024 winter-recovered water levels for wells in the unconfined aquifer in the Plains area of the Tintinara Coonalpyn PWA

Unconfined aquifer: Mallee Highlands Groundwater management areas: Sherwood

Water Levels

Five-year trends show declining water levels in all of the wells (100%), with rates of decline ranging between 0.12-0.02 m/y (median is a decline of 0.03 m/y).

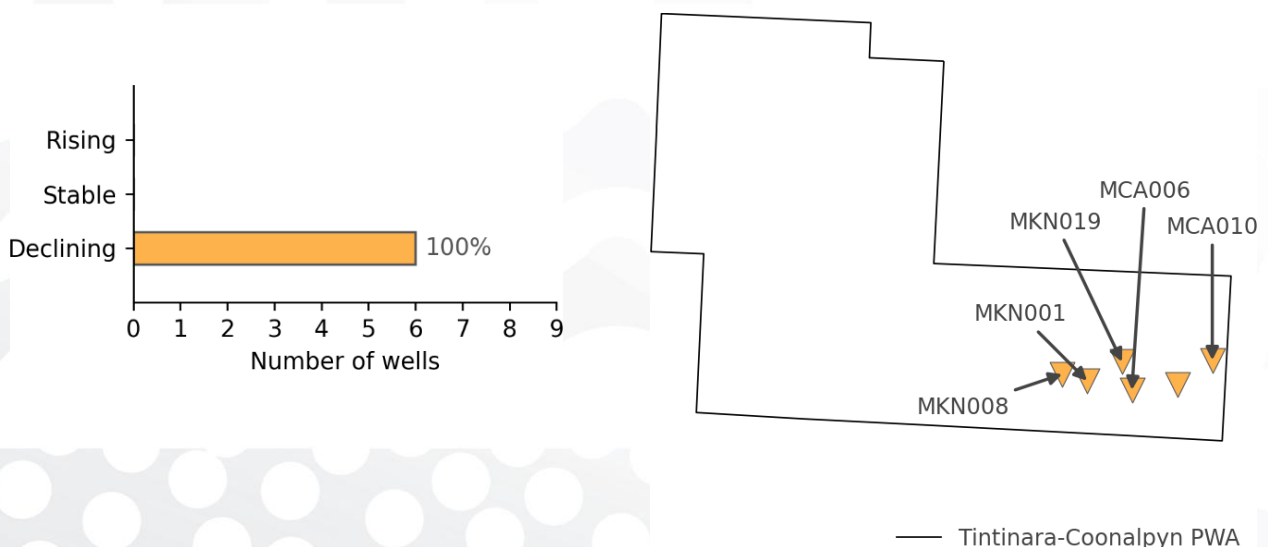


Figure 6: Five year trend to 2024 winter-recovered water levels for wells in the unconfined aquifer in the Highlands area of the Tintinara Coonalpyn PWA

Over the past 10 years, variations in water level in 7 wells range from a decline of 1.26 m to a decline of 0.23 m (median is a decline of 0.4 m).

Over the past 20 years, variations in water level in 6 wells range from a decline of 2.34 m to a decline of 0.64 m (median is a decline of 1.1 m).

Over the past 30 years, variations in water level in 1 well range from a decline of 0.44 m to a decline of 0.44 m (median is a decline of 0.4 m).

Winter recovered water levels

In 2024, winter recovered water levels in 6 out of 7 (86%) of monitoring wells in the unconfined aquifer of the Mallee Highlands in the Tintinara-Coonalpyn PWA are classified as 'Below average' or lower:

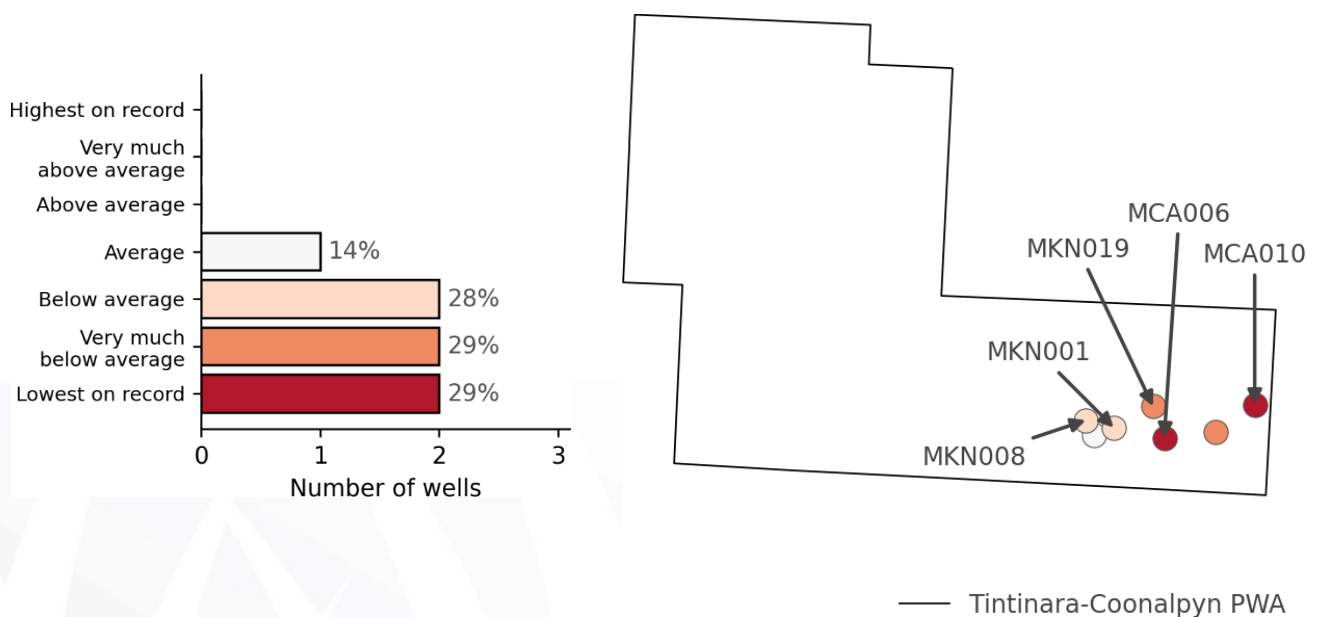


Figure 7: 2024 winter-recovered water levels for wells in the unconfined aquifer in the Mallee Highlands area of the Tintinara Coonalpyn PWA

Tintinara-Coonalpyn DTW trends (unconfined aquifer)

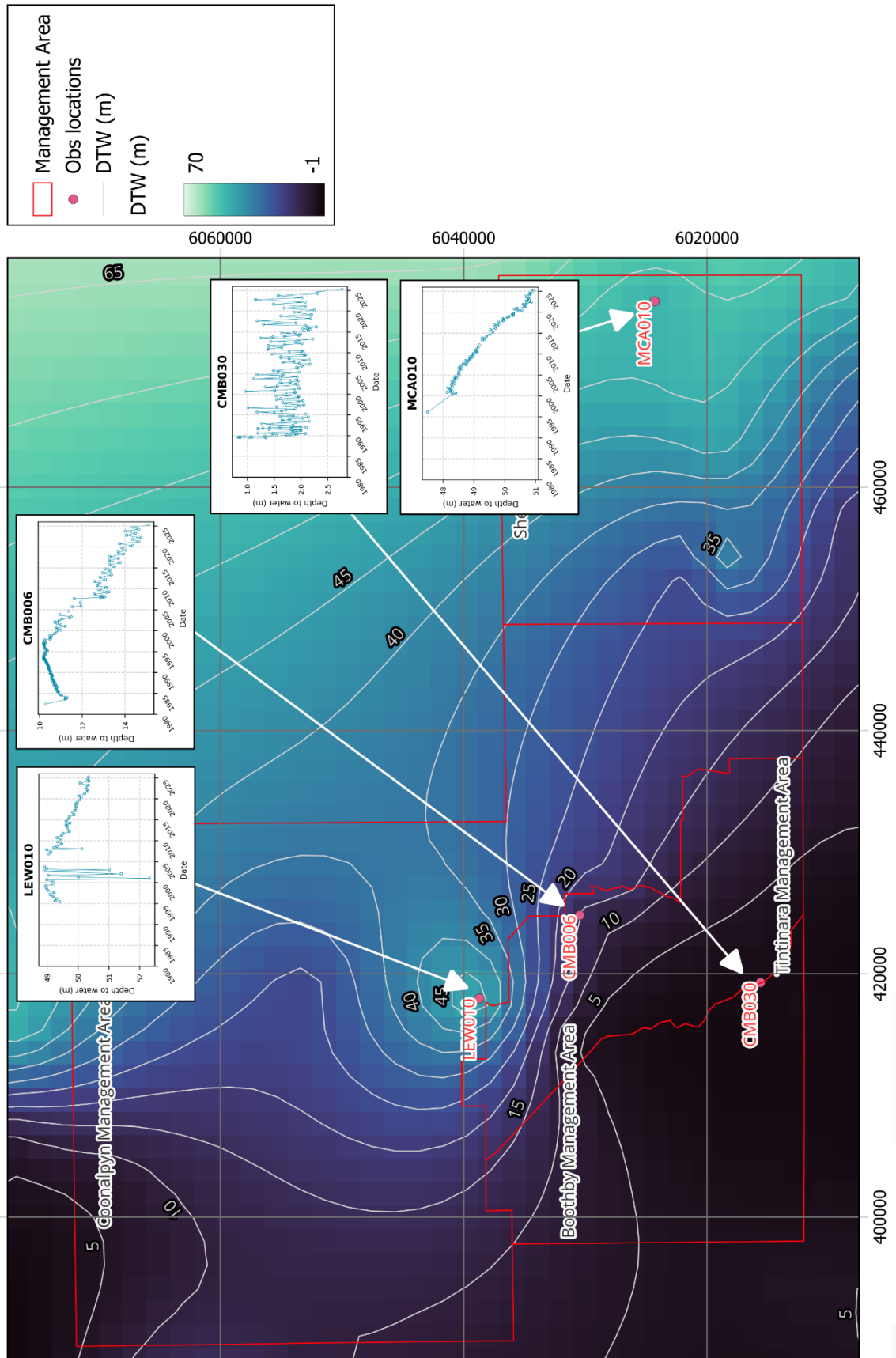


Figure 8: Indicative depth to water contour map for the unconfined aquifer in the Tintinara Coonalpyn PWA (DEW, 2025)

Unconfined aquifer Potentiometric surface

For the unconfined aquifer, the potentiometric surface contour elevations are relative to sea level (mAHD) and represents the water table, irrespective of surface topography.

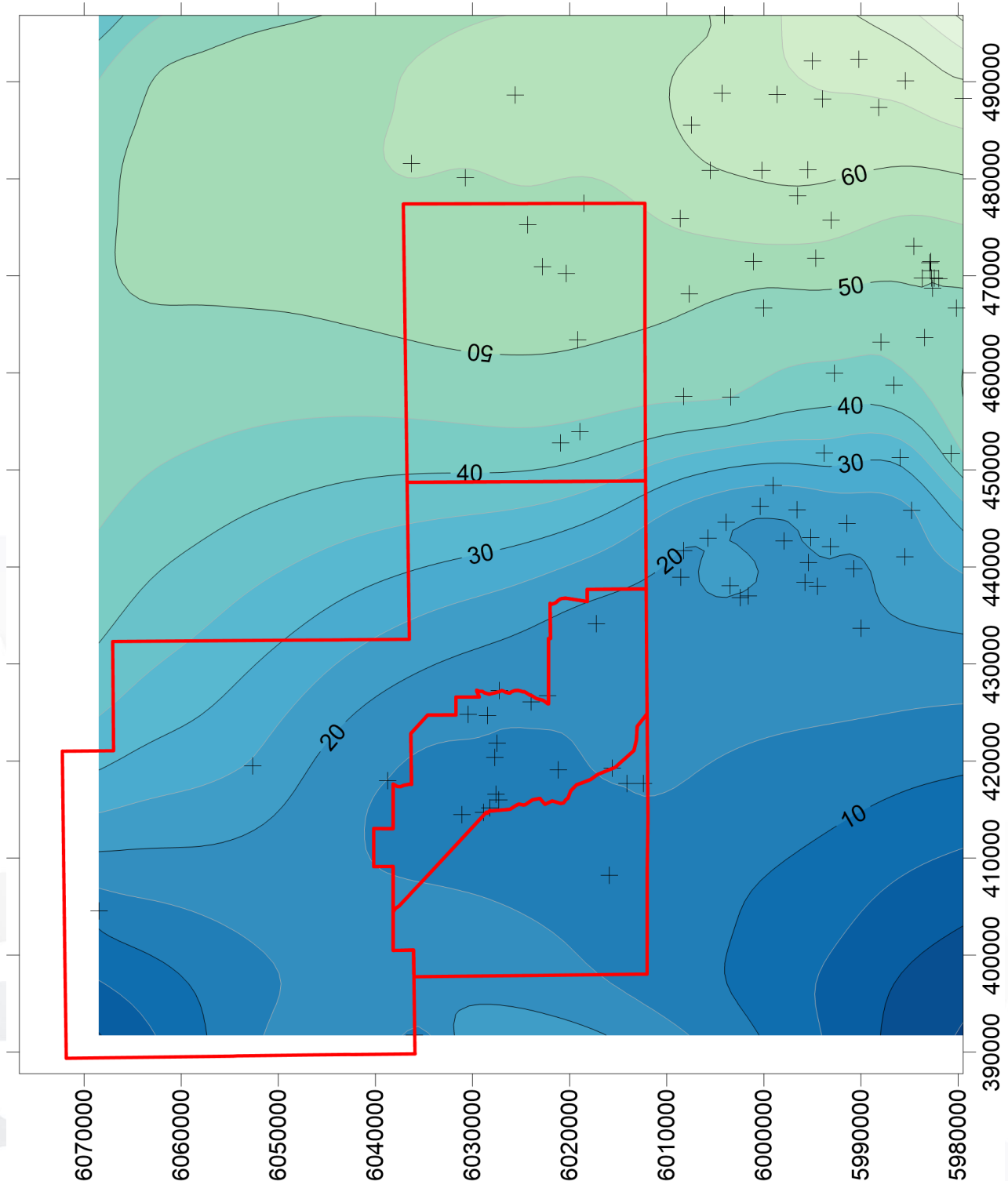


Figure 9: Map of indicative potentiometric surface for the unconfined aquifer in the Tintinara Coonalpyn PWA (DEW, 2025)

Confined aquifer

Current groundwater level monitoring observation wells

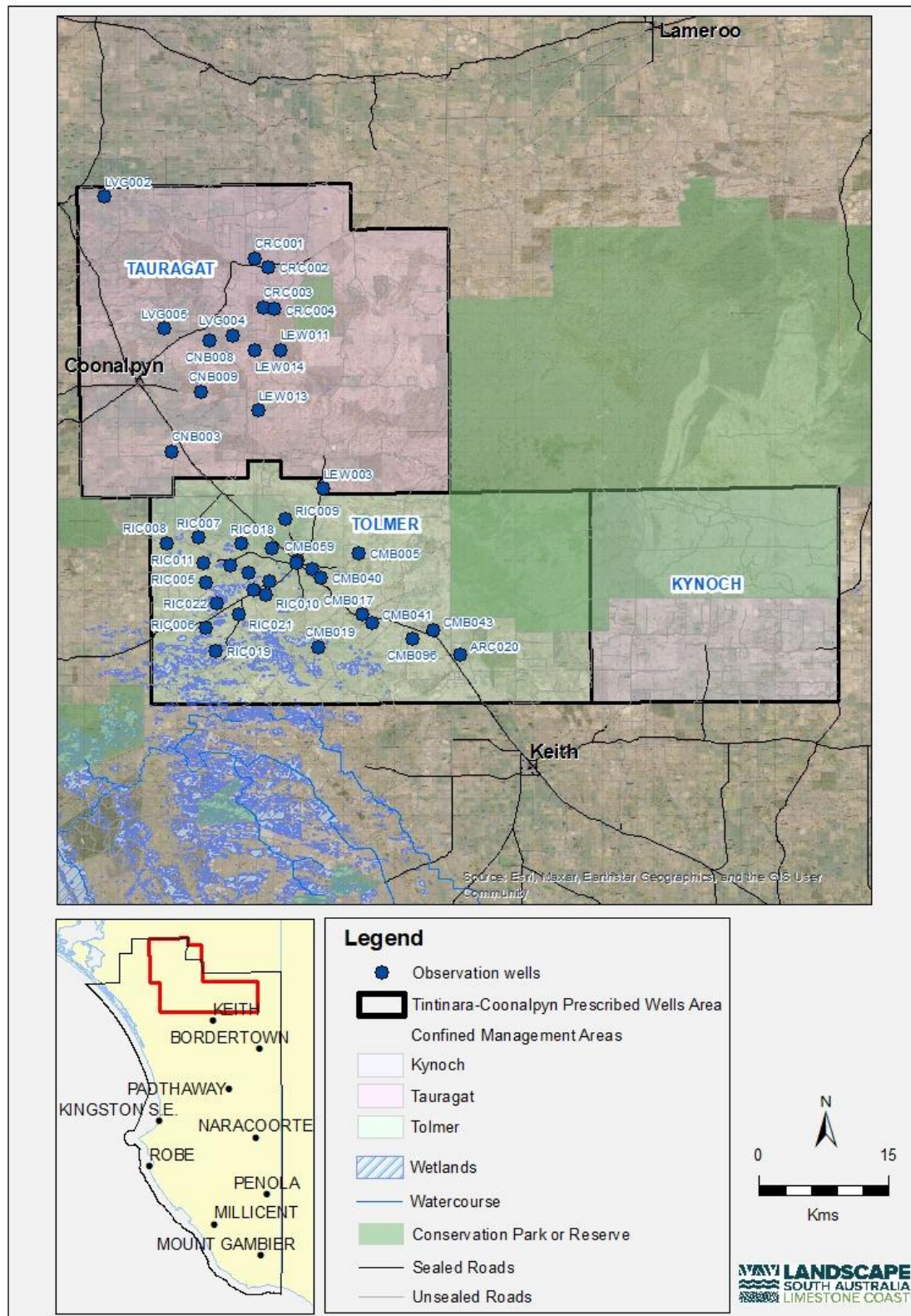


Figure 10: Map of current groundwater level monitoring observation wells in the confined aquifer in the Tintinara Coonalpyn PWA

Confined aquifer

Groundwater level hydrographs

Data sourced from WaterConnect for thirty three (33) current observation wells for Tintinara Coonalpyn PWA. Data classified as anomalous has been removed. Graphs are shown as rSWL as mAHD.

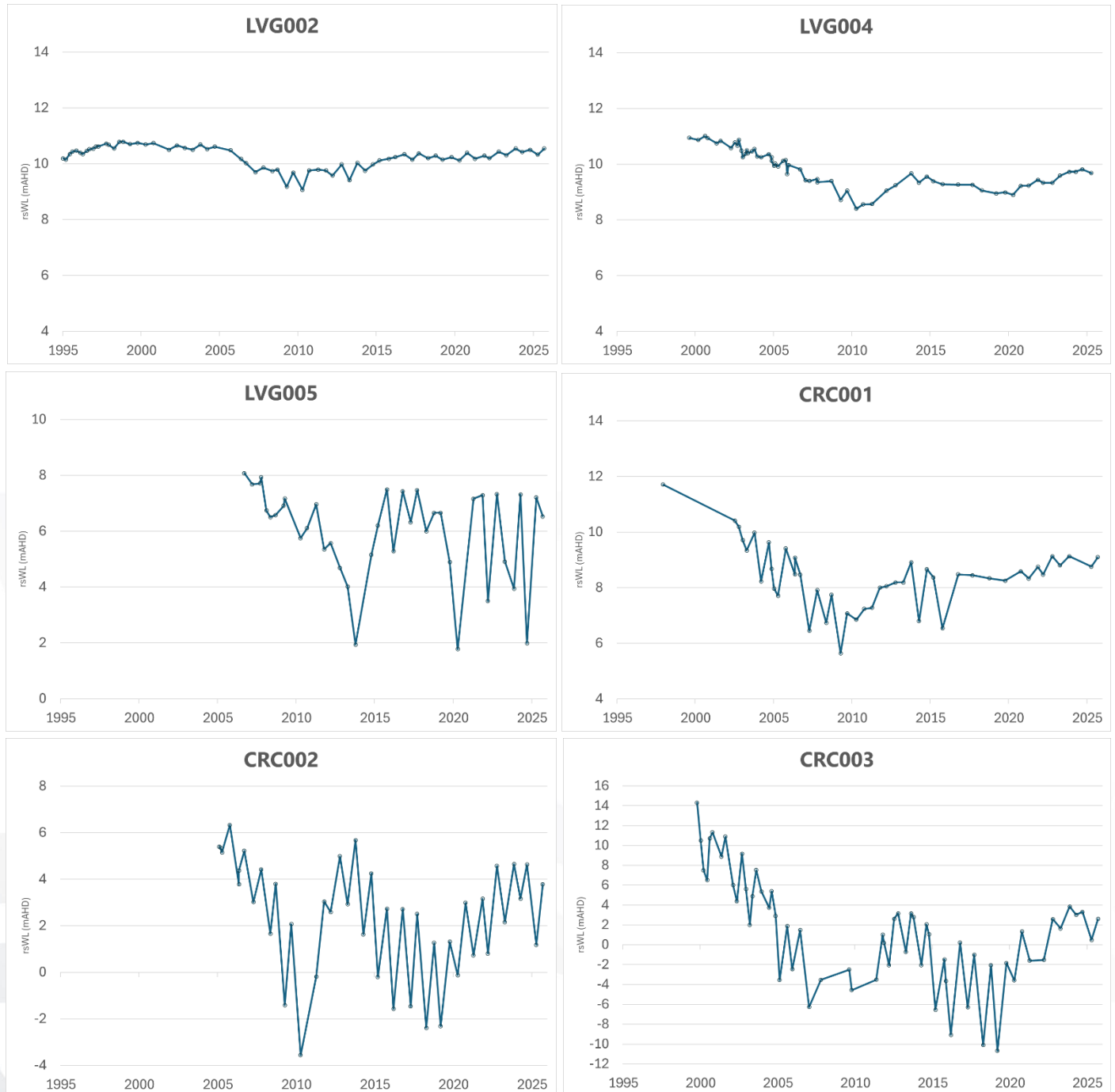
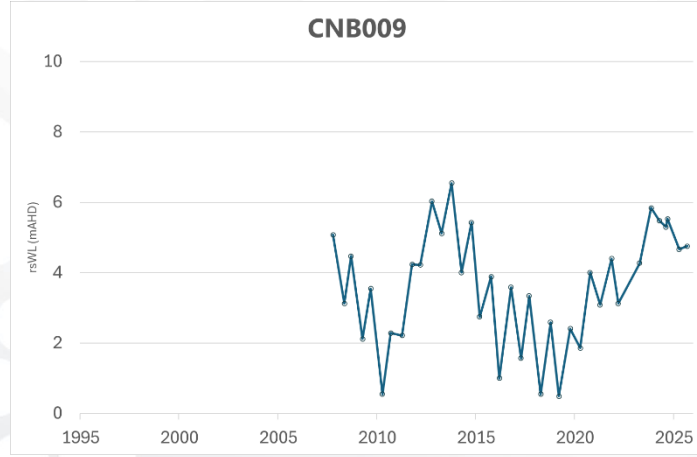
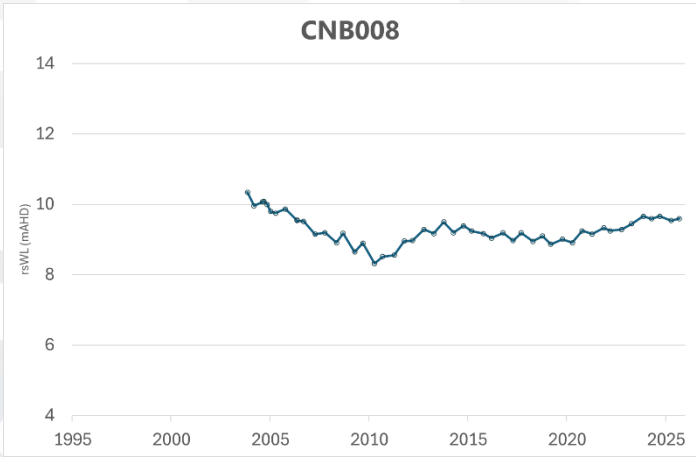
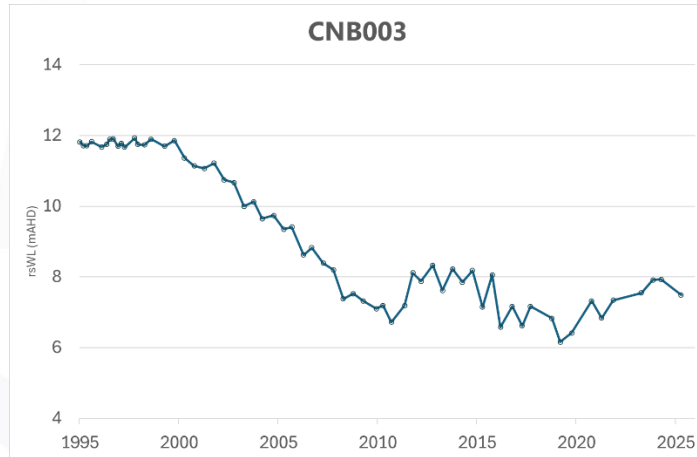
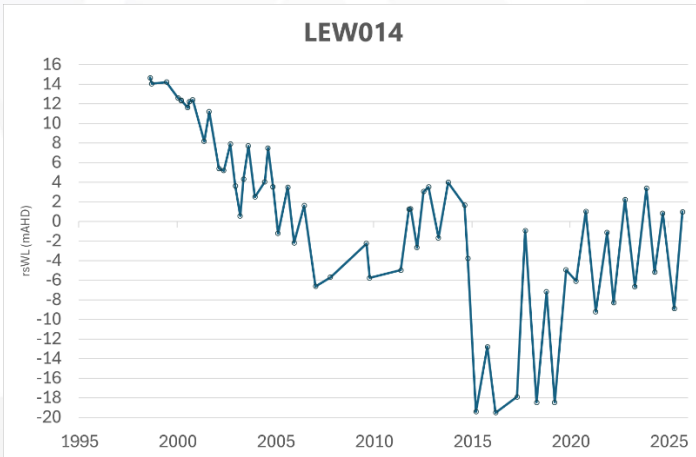
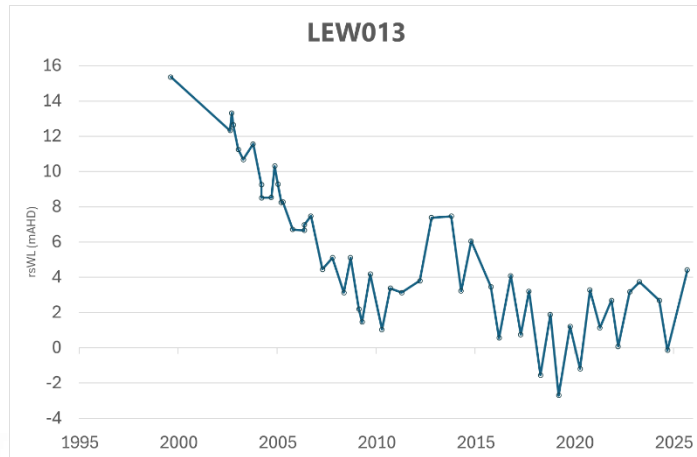
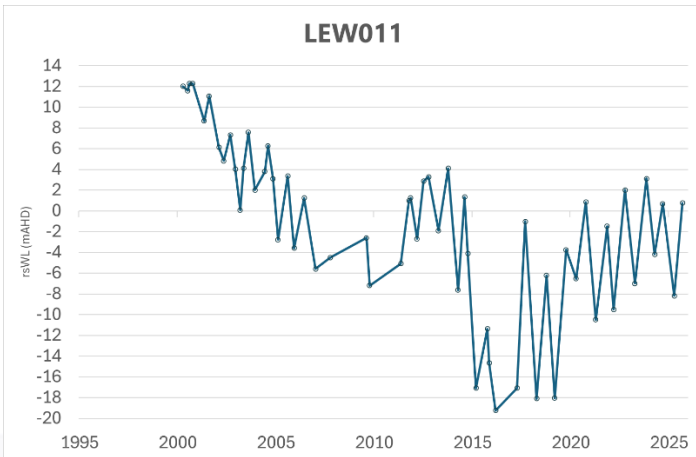
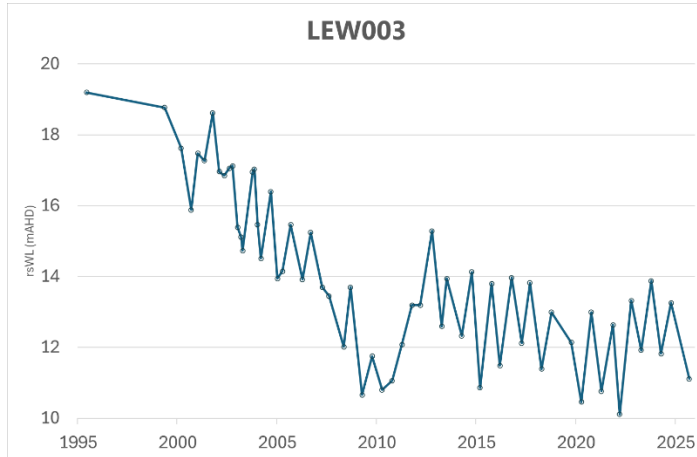
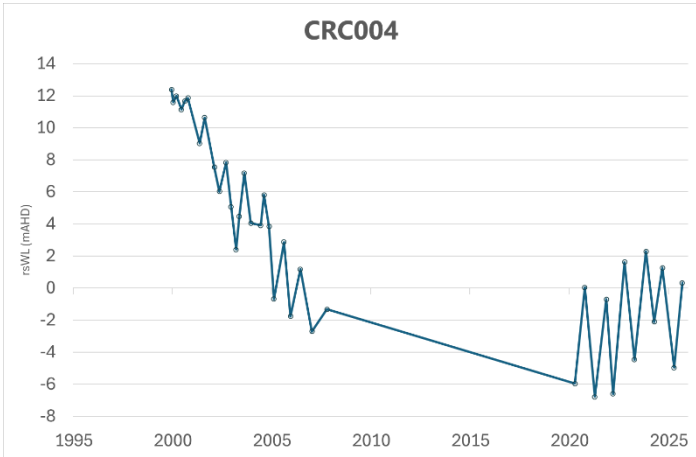
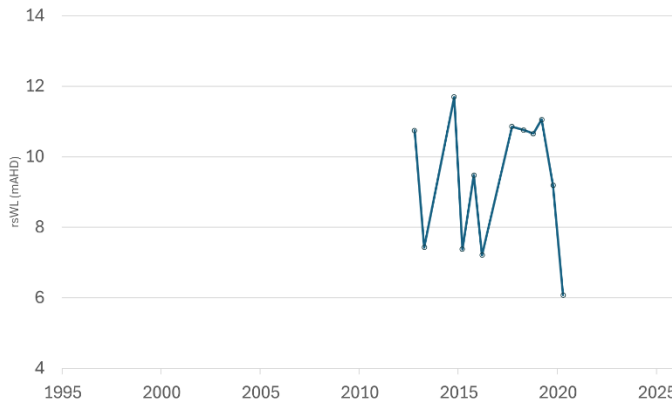


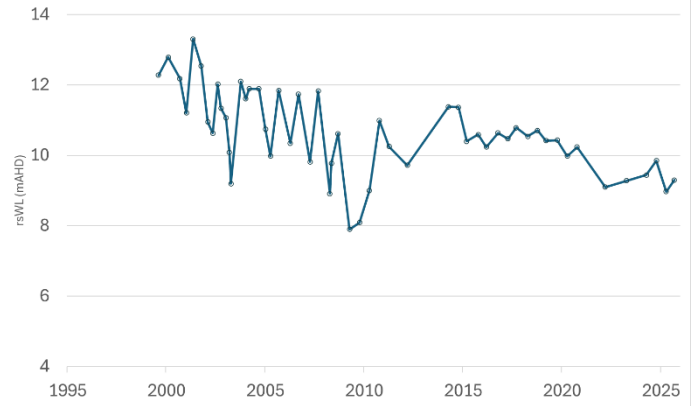
Figure 11: Hydrographs for wells in the confined aquifer in the Tintinara Coonalpyn PWA (Hundreds of Livingston (LVG), Carcuma (CRC), Lewis (LEW), Coneybeer (CNB), Richards (RIC), Coombe (CMB), Archibald (ARC)).



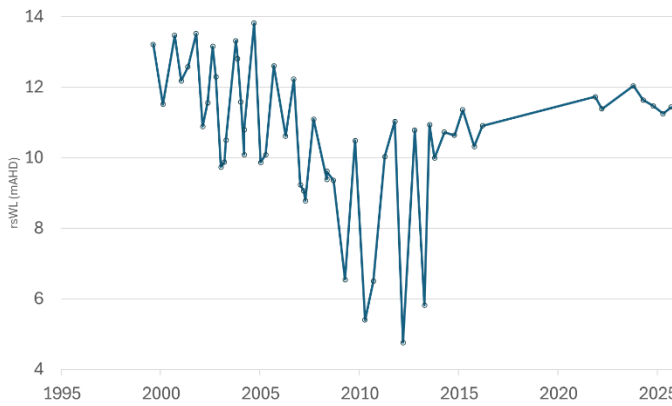
RIC005



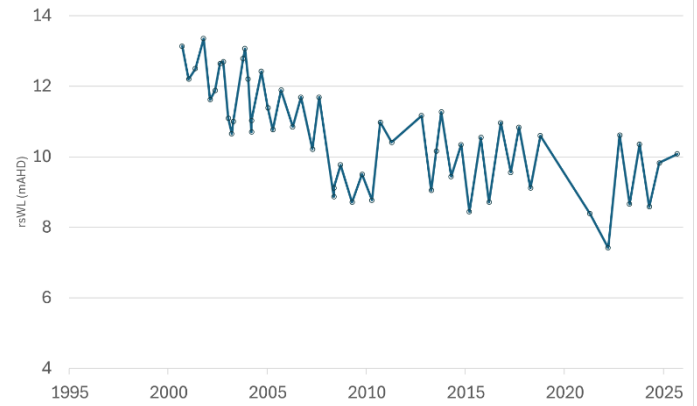
RIC006



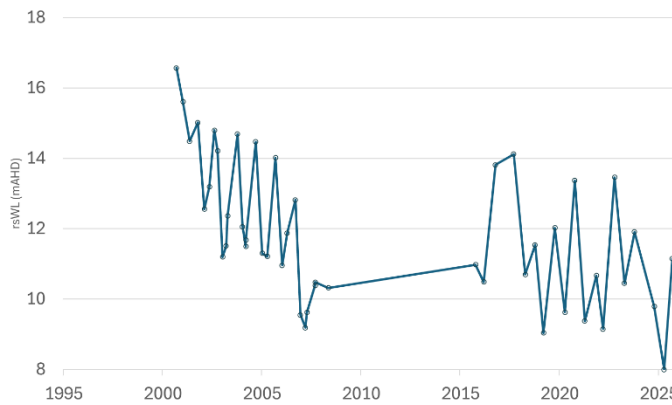
RIC007



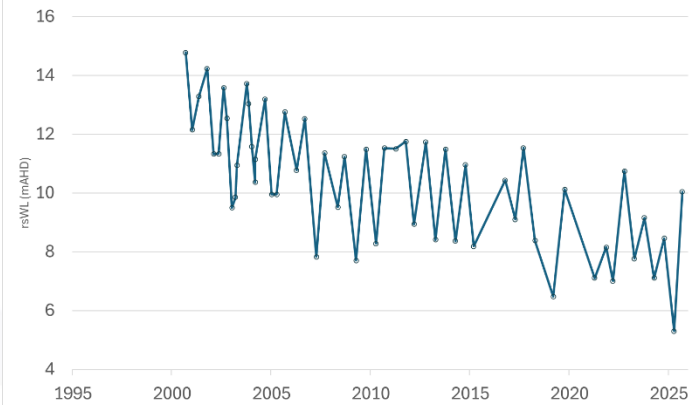
RIC008



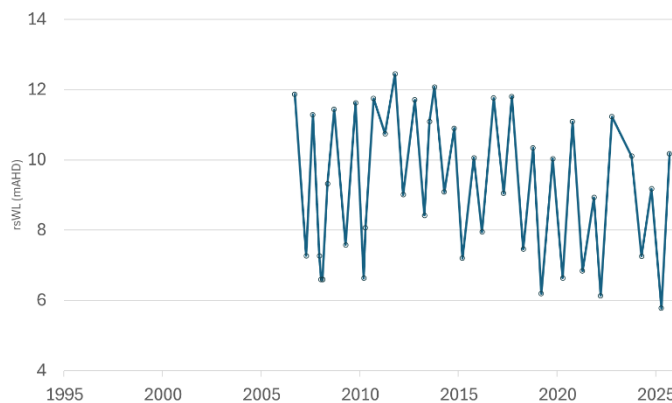
RIC010



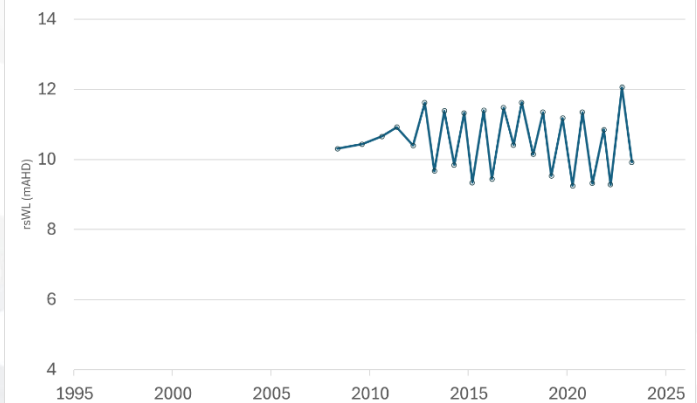
RIC011

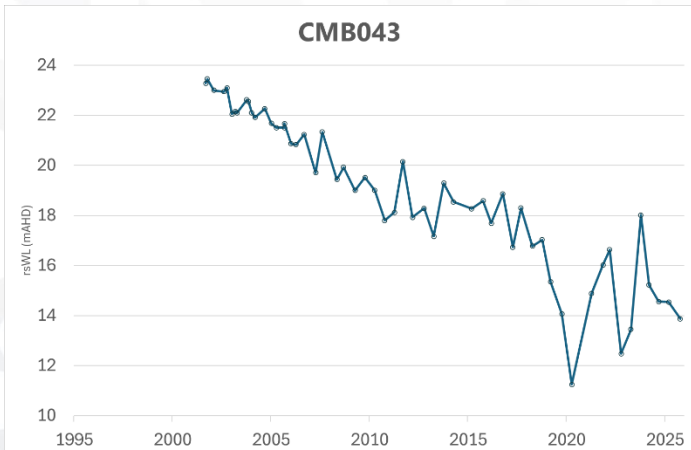
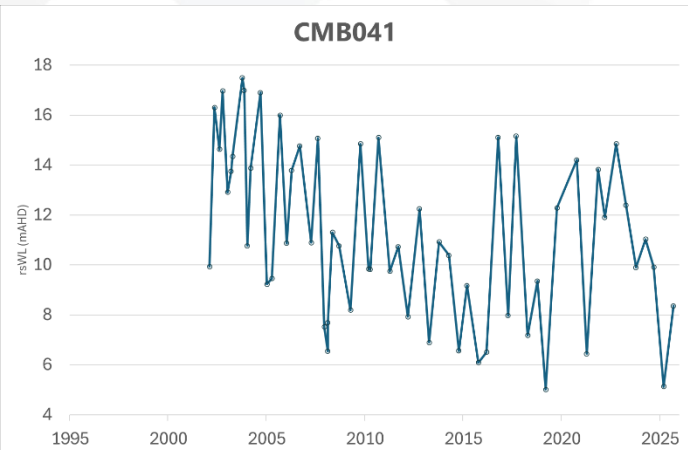
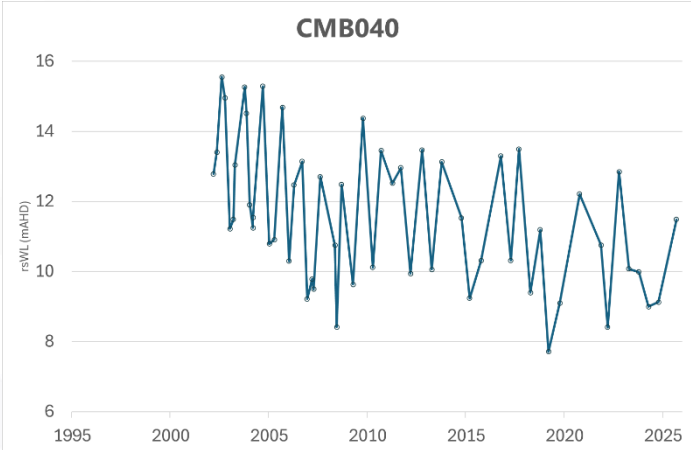
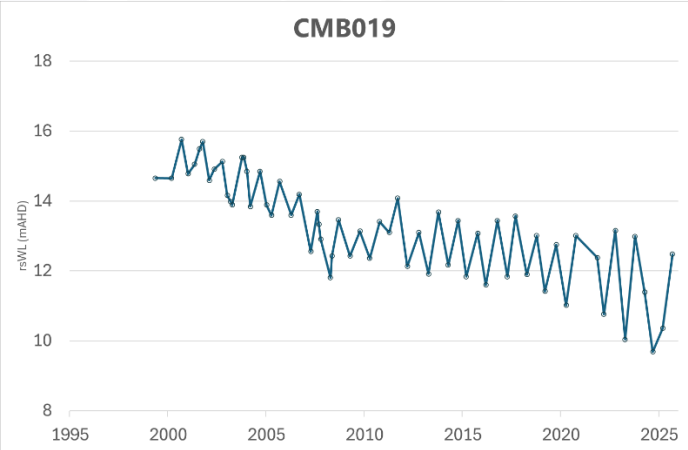
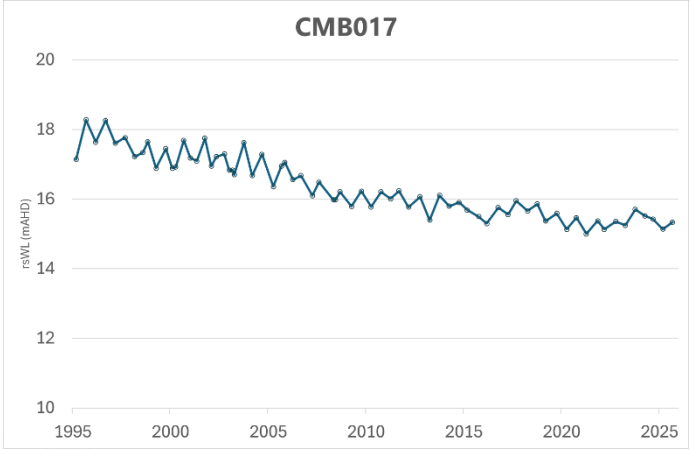
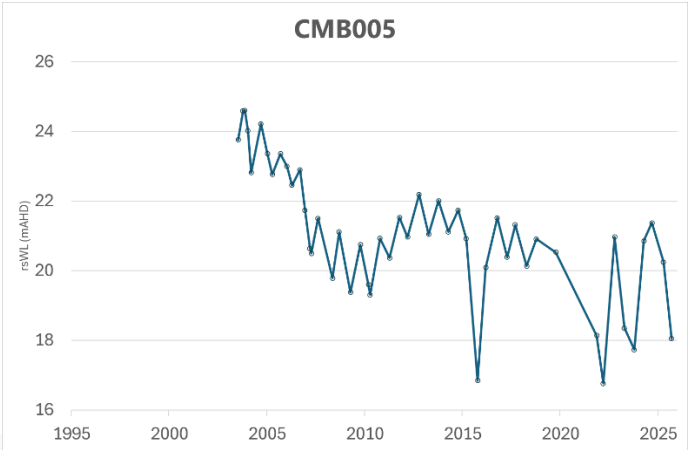
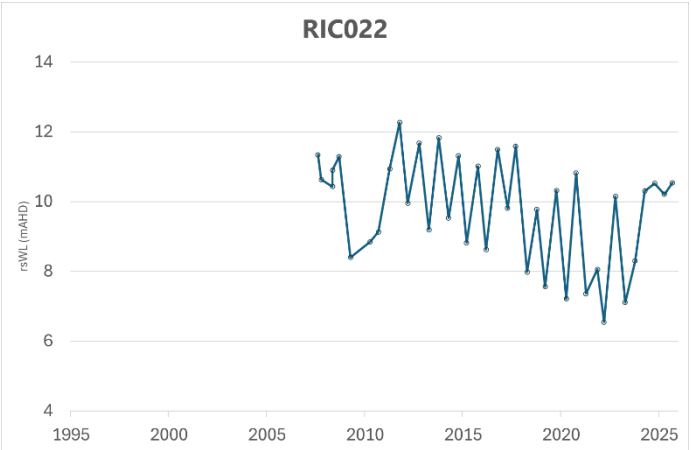
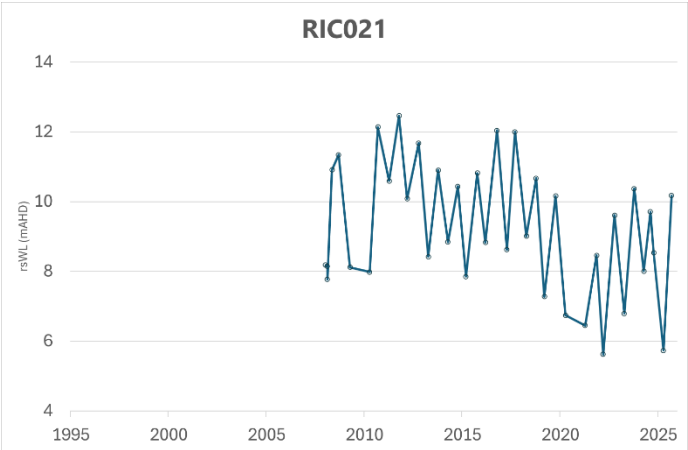


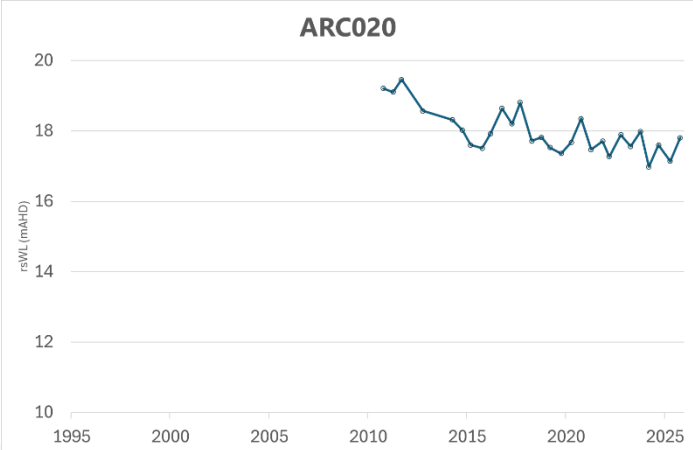
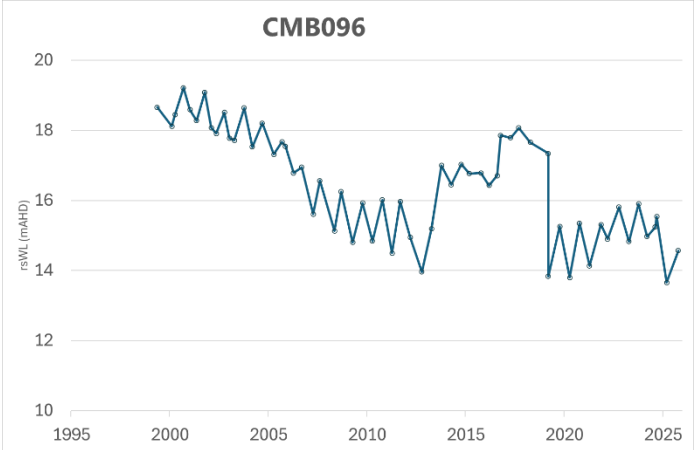
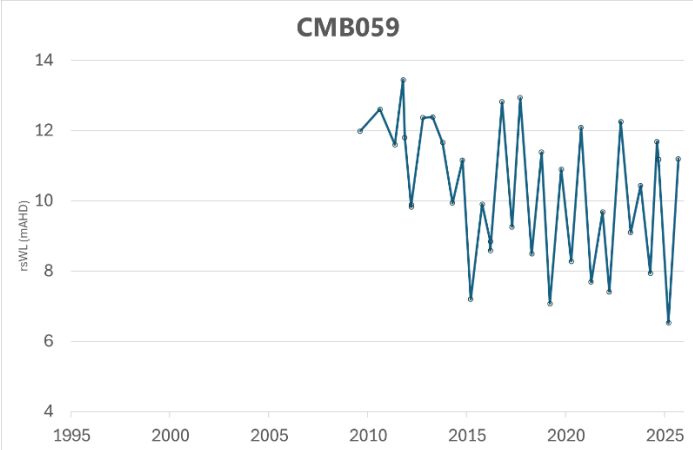
RIC018



RIC019







Tintinara-Coonalpyn RSWL trends (confined aquifer)

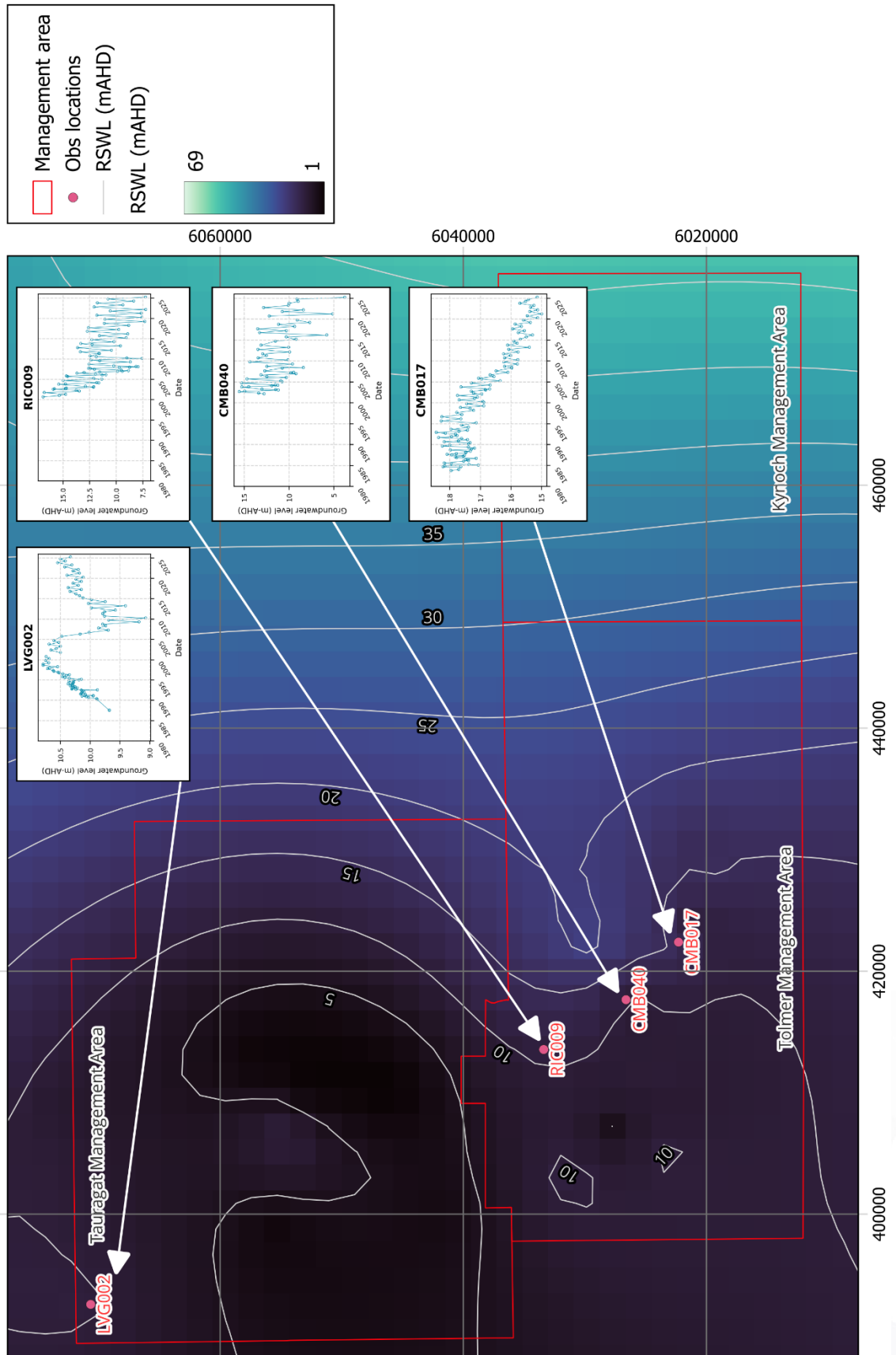


Figure 12: Indicative RSWL contour map for the confined aquifer in the Tintinara Coonalpyn PWA (DEW, 2025)

Confined aquifer

Groundwater management areas: Tolmer, Tauragat

Water Levels

Five-year trends show declining and rising water levels in the majority of wells (91%), with rates ranging from a decline of 0.99 m/y to a rise of 0.56 m/y (median decline of 0.18 m/y).

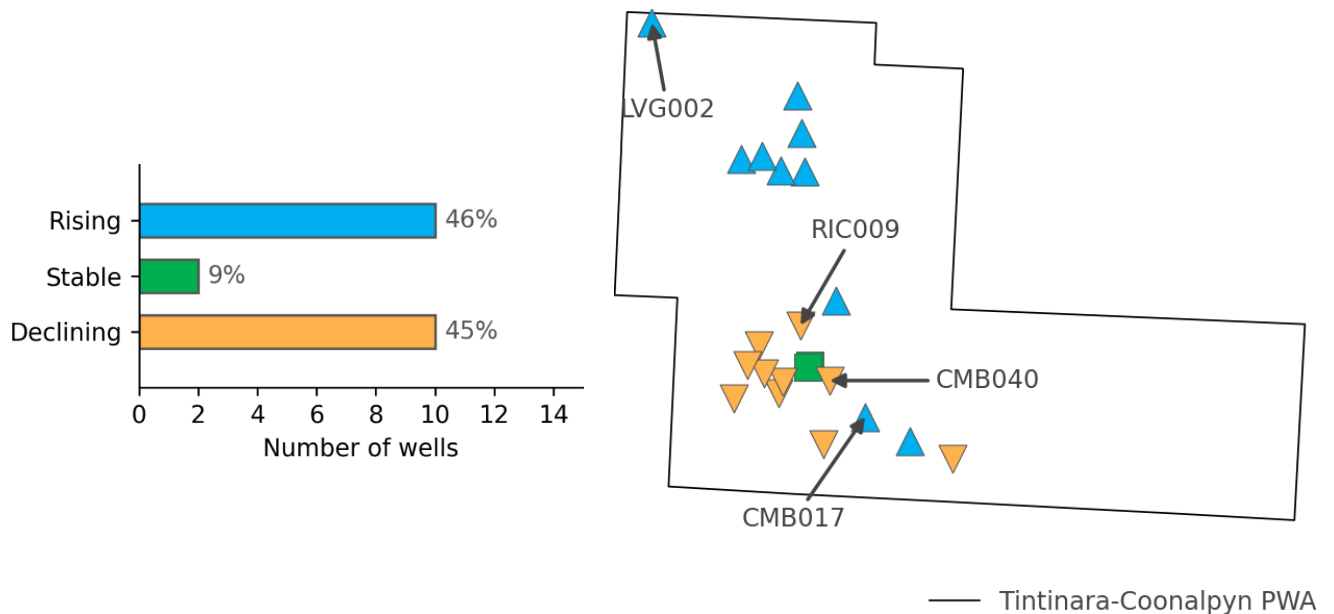


Figure 13: Five year trend to 2024 winter-recovered water levels for wells in the confined aquifer in the Tintinara Coonalpyn PWA

Over the past 10 years, variations in water level in 34 wells range from a decline of 5.60 m to a rise of 6.09 m (median is a decline of 1.0 m).

Over the past 20 years, variations in water level in 25 wells range from a decline of 8.31 m to a rise of 2.97 m (median is a decline of 2.2 m).

Over the past 30 years, variations in water level in 3 wells range from a decline of 6.86 m to a rise of 0.04 m (median is a decline of 2.6 m).

Winter recovered water levels

In 2024, winter recovered water levels in 21 out of 35 (60%) of monitoring wells in the confined aquifer of the Tintinara-Coonalpyn PWA are classified as 'Below average' or lower.

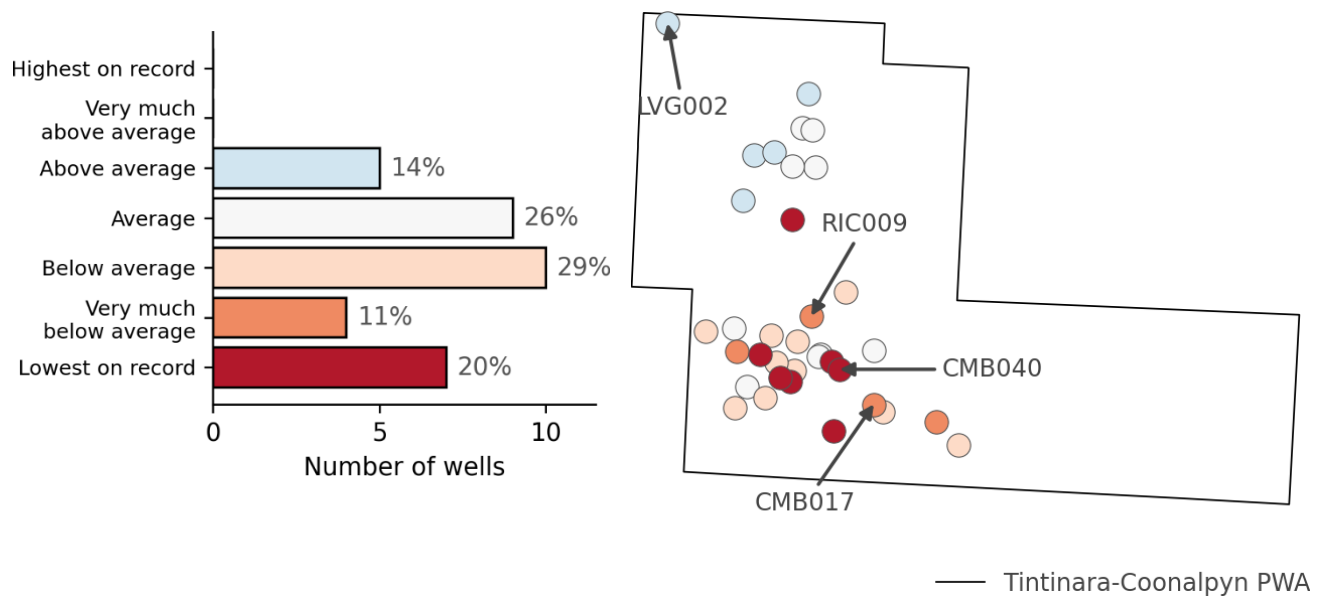


Figure 14: 2024 winter-recovered water levels for wells in the confined aquifer in the Tintinara Coonalpyn PWA

Salinity

In 2024, sampling results from 12 wells in the confined aquifer of the Tintinara-Coonalpyn and Tatiara PWAs ranged between 960 mg/L and 3998 mg/L with a median of 1506 mg/L.

In the 10 years to 2024, 6 of 11 wells (54%) show a decreasing trend in salinity. 10-year trends show that rates of change in salinity vary from a decrease of 0.3% per year to an increase of 0.8% per year.

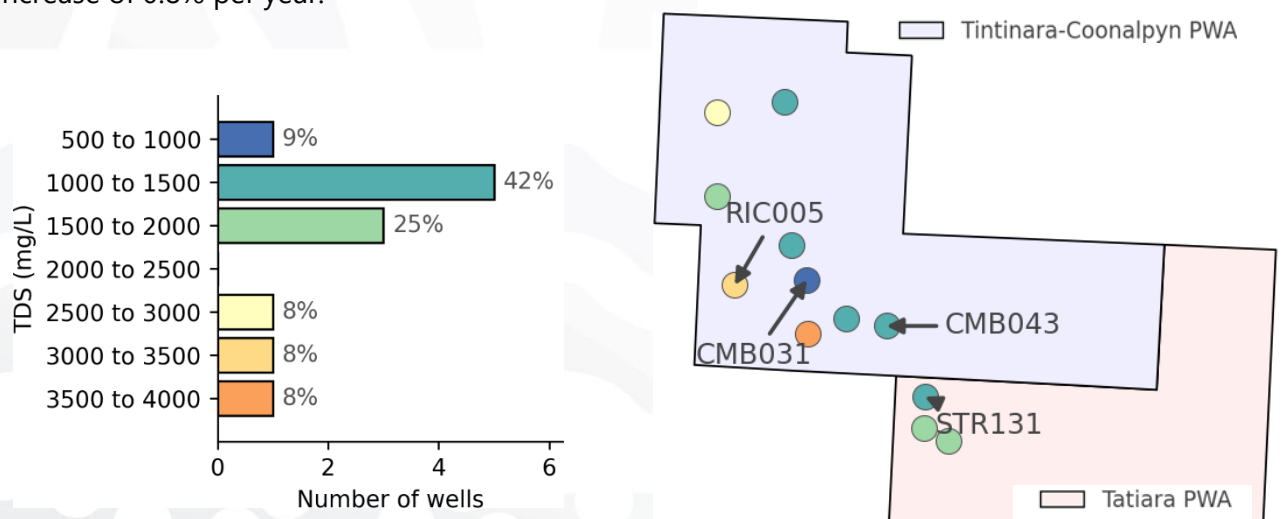


Figure 15: 2024 salinity observations from wells in the confined aquifer in the Tintinara-Coonalpyn and Tatiara PWAs

Confined aquifer Potentiometric surface

For the confined aquifer, the potentiometric surface is an imaginary surface that represents the level to which groundwater will rise in tightly cased wells that tap a confined aquifer. It reflects the hydraulic head of the groundwater being the level at which the water level would rise to if a well was drilled at that location. The surface can be above the ground level, in which case it is artesian, or below it.

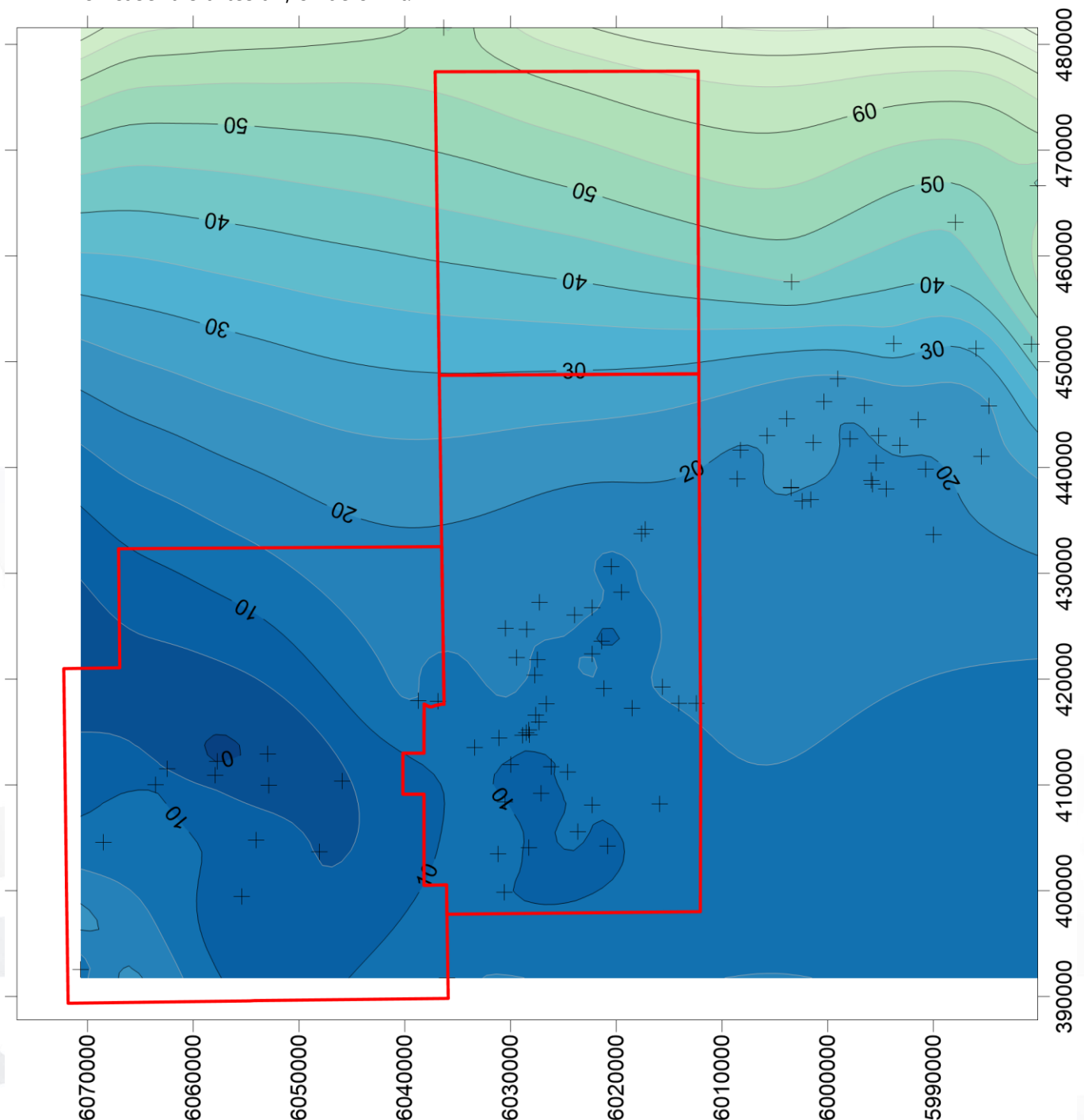


Figure 16: Map of indicative potentiometric surface for the confined aquifer in the Tintinara Coonalpyn PWA (DEW, 2025).

Further information

Water monitoring wells

Check out groundwater level and salinity monitoring from observation wells in the Tintinara Coonalpyn Prescribed Wells Area:

- Observation well map with graphs:
<https://engage.lclandscapesa.com.au/tintinara-coonalpyn-water-allocation-plan-review/observation-wells-tintinara-coonalpyn-prescribed-wells-area>
- Waterconnect (DEW) <https://www.waterconnect.sa.gov.au/>

Water resources condition update

The 2024 Tintinara Coonalpyn Water Resource Condition update can be accessed at:

<https://engage.lclandscapesa.com.au/tintinara-coonalpyn-water-allocation-plan-review>

Tintinara Coonalpyn Water Allocation Plan review

Check out the project page and click +Follow to receive updates as the review progresses:

<https://engage.lclandscapesa.com.au/tintinara-coonalpyn-water-allocation-plan-review>

Contact Us

Have questions or want to learn more, contact:

Limestone Coast Landscape Board

Phone 08 8429 7550

Email landscapesa.tcwap@sa.gov.au

Website lc.landscape.sa.gov.au