

Tintinara Coonalpyn Prescribed Wells Area

Water Allocation Plan review

Salinity monitoring

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.

Salinity monitoring data has been of interest and concern in the review process so far. This overview has been developed to transparently show the current 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 salinity monitoring

‘Current salinity monitoring’ refers to the wells that have been monitored for salinity since 2021. In general, monitoring has remained fairly stable since 2014. The data on WaterConnect shows the current salinity observation network includes:

- Fourteen (14) salinity monitoring wells in the unconfined aquifer
- Nine (9) salinity monitoring wells in the confined aquifer.

Historical data may also be available for wells which have not been monitored since 2021. These are publicly available and can be accessed through WaterConnect.

For salinity, monitoring frequency can vary between 6 monthly, 12 monthly or occasionally less frequently where there is generally a stable trend over time, or the well is less accessible. Monitoring of groundwater levels 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 and 10 year salinity 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 salinity monitoring observation wells are provided in this summary document. The hydrographs show varying trends in salinity over the period of monitoring.

Unconfined aquifer Current salinity monitoring observation wells

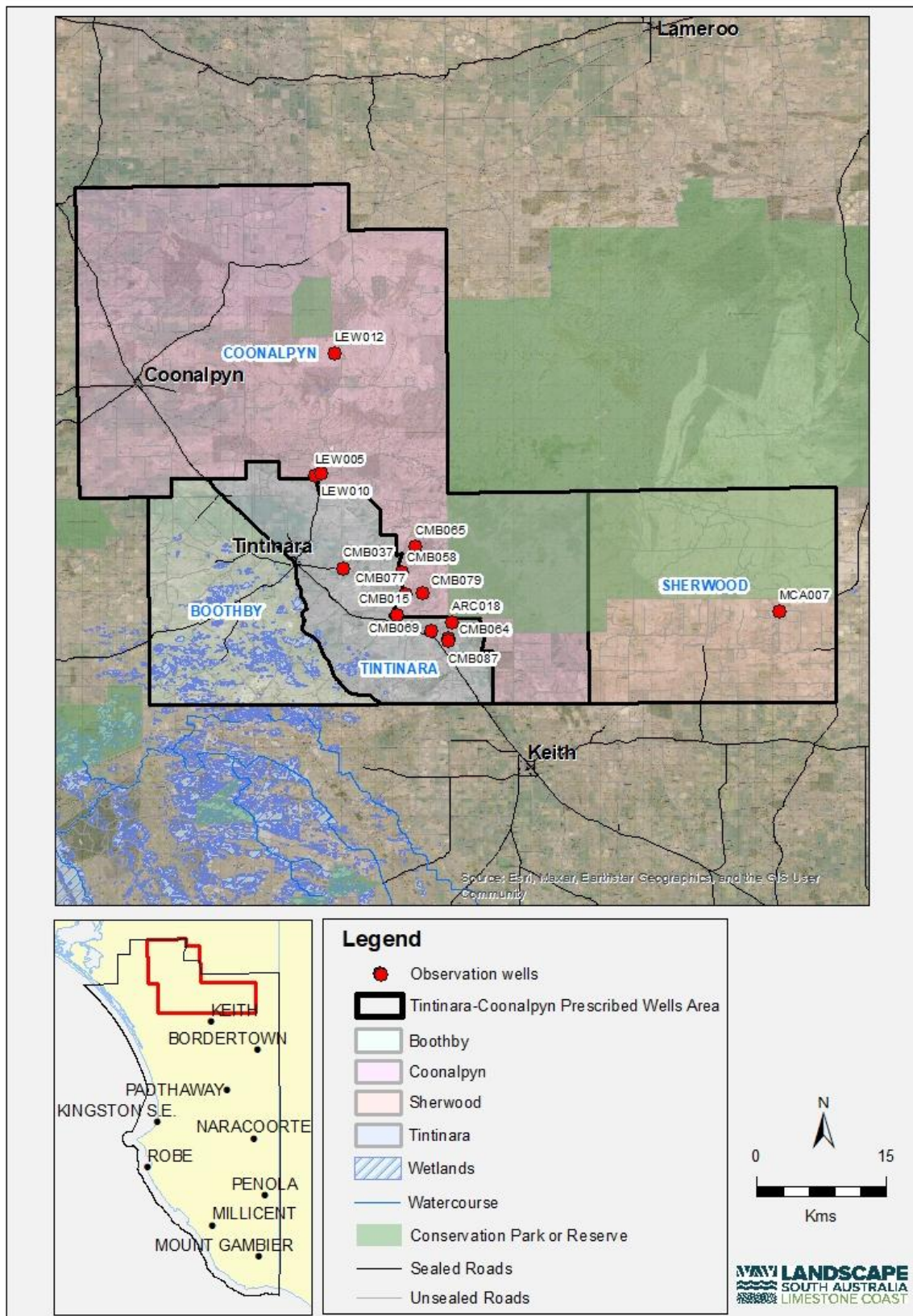
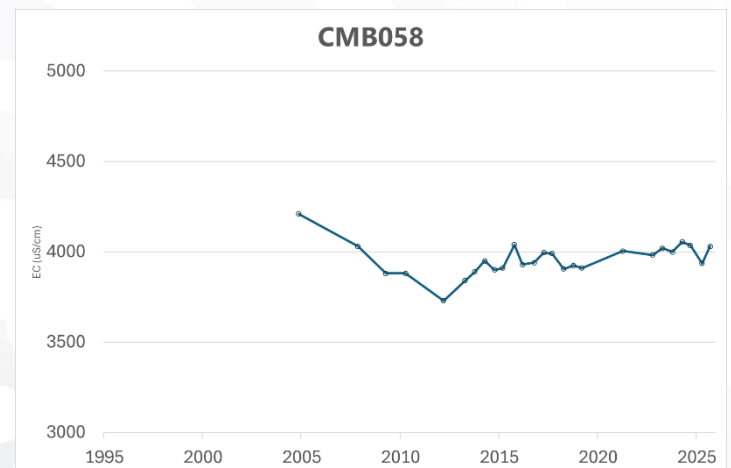
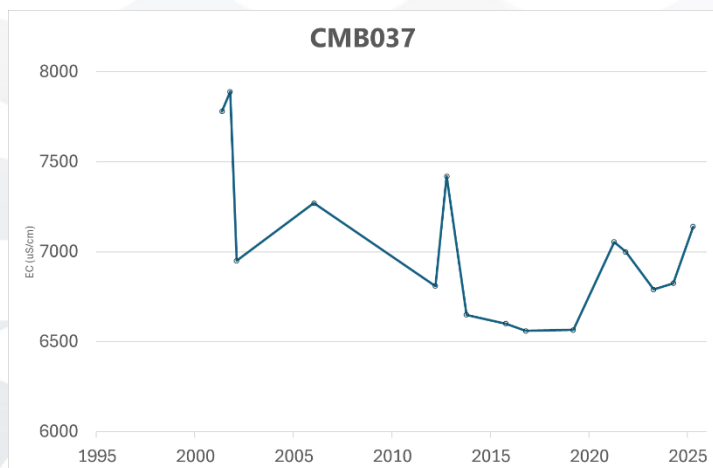
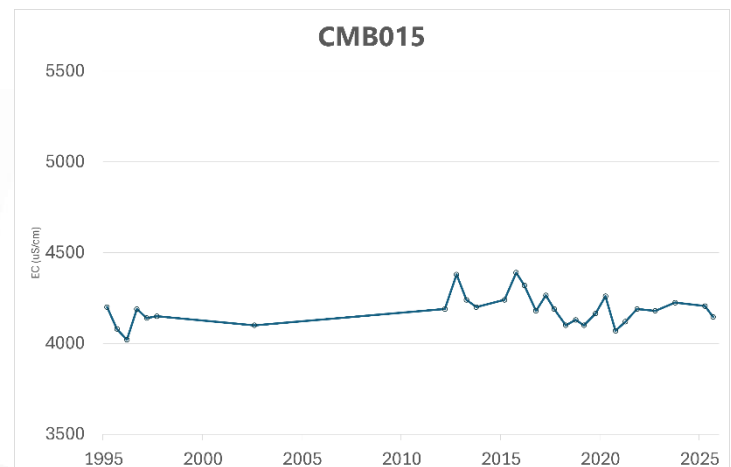
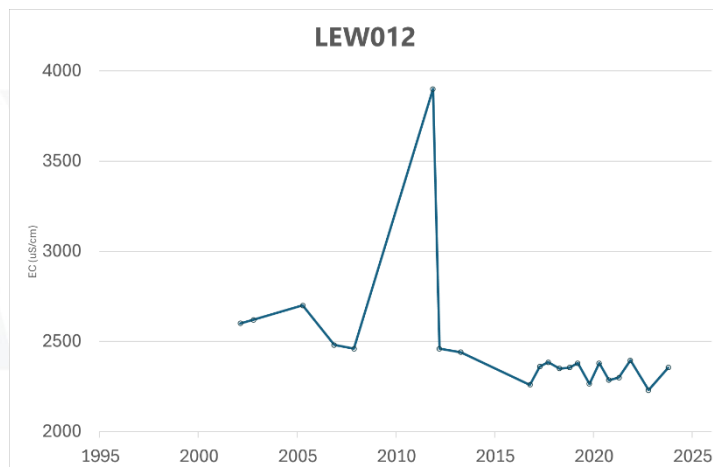
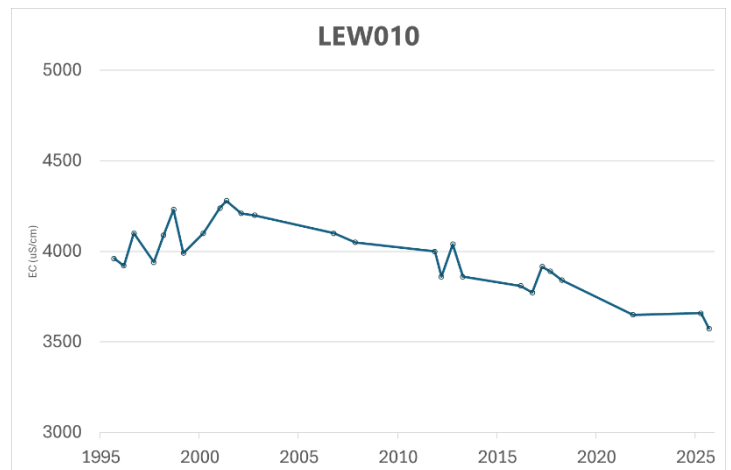
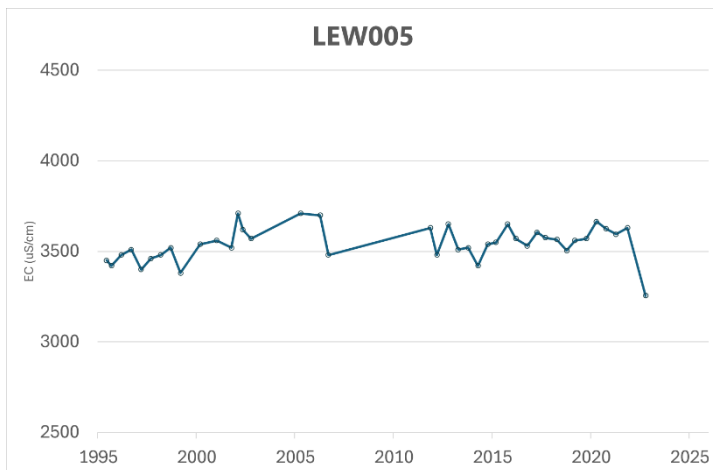
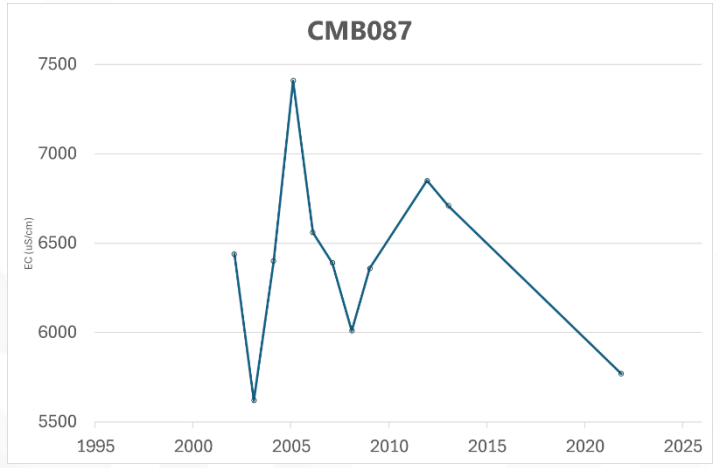
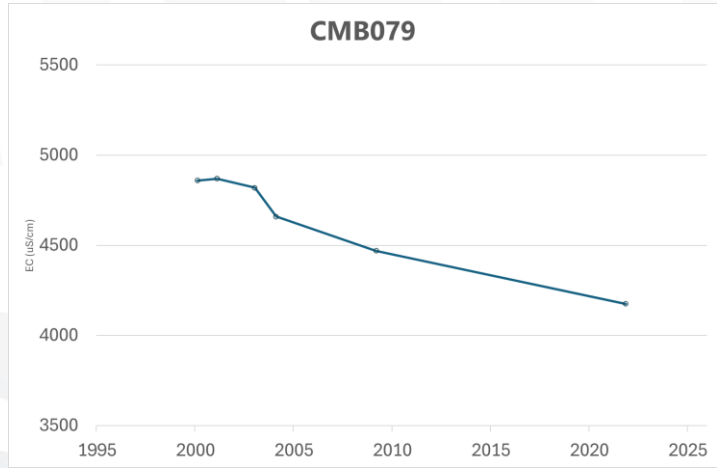
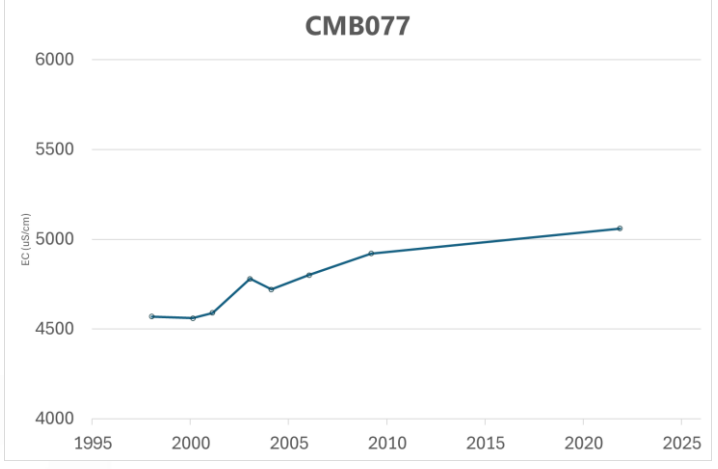
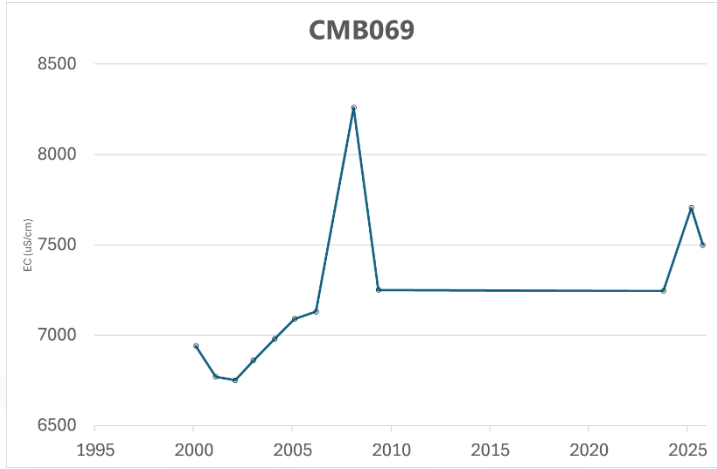
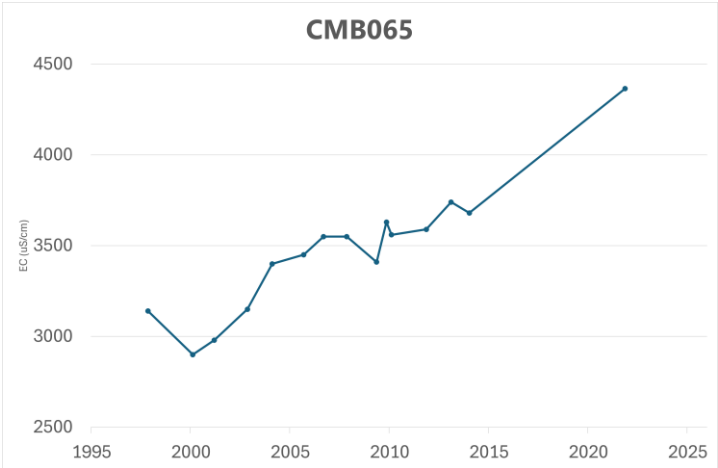
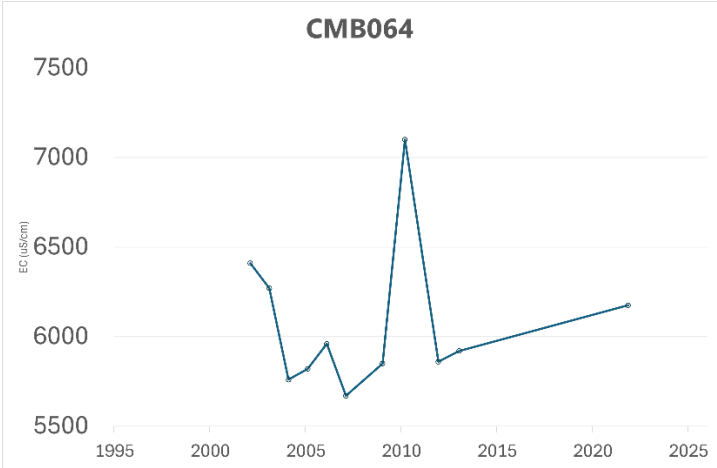


Figure 1: Map of current salinity monitoring observation wells in the unconfined aquifer in the Tintinara Coonalpyn PWA.

Unconfined aquifer Salinity level hydrographs

Data sourced from WaterConnect for fourteen (14) current observation wells for Tintinara Coonalpyn PWA monitored since 2021. Data classified as anomalous has been removed. Graphs are shown in EC ($\mu\text{S}/\text{cm}$). To get an approximate ppm or mg/L equivalent, times (x) EC ($\mu\text{S}/\text{cm}$) by .55





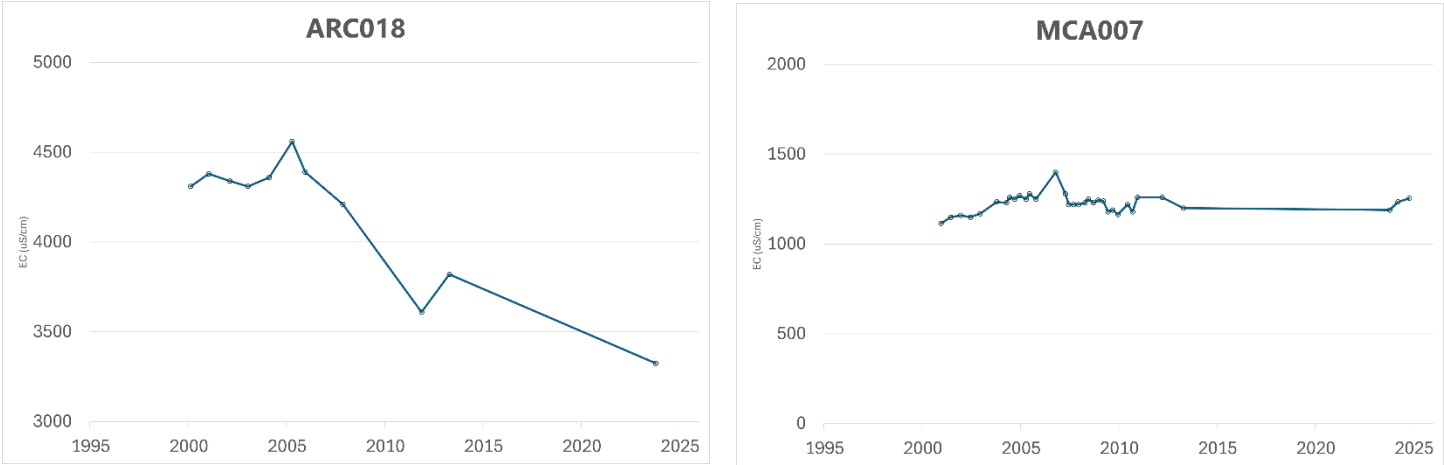


Figure 2: Salinity hydrographs for wells in the unconfined aquifer in the Tintinara Coonalpyn PWA (Hundreds of Lewis (LEW), Coombe (CMB), Archibald (ARC), McCallum (MCA)).

Unconfined aquifer 2021 Salinity update (DEW, 2022)

In 2021, sampling results from 11 wells in the unconfined aquifer of the Tintinara-Coonalpyn PWA ranged between 1,298 mg/L and 3,960 mg/L with a median of 2,326 mg/L.

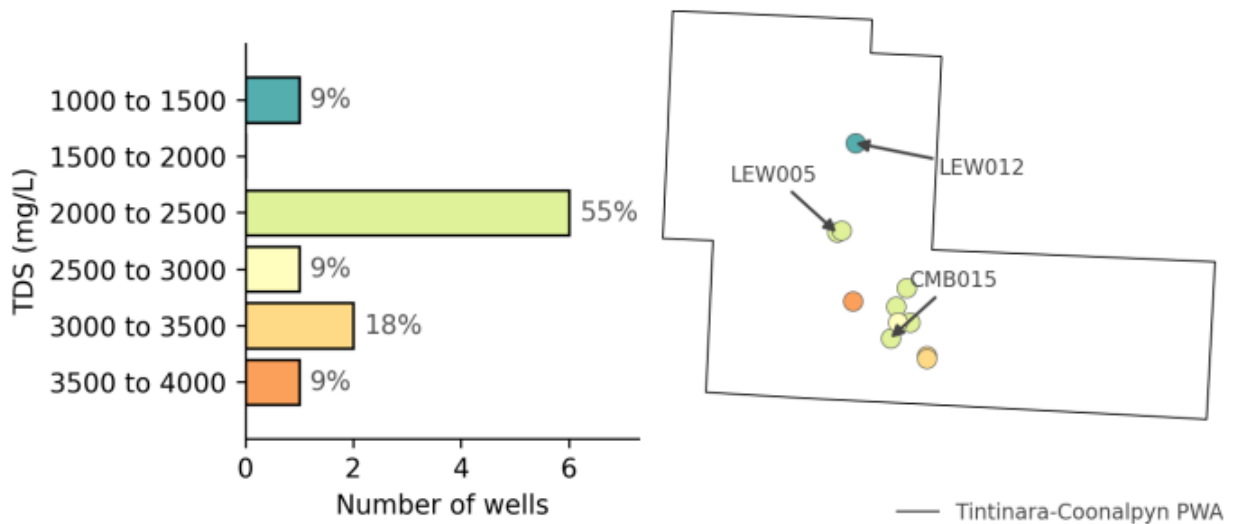


Figure 3: 2021 salinity observations from wells in the unconfined aquifer in the Tintinara-Coonalpyn PWA (DEW, 2021)

In the 10 years to 2021, wells with continuous monitoring during those 10 years across Tintinara Coonalpyn PWA show stable trends in salinity. 10-year trends show that rates of change in salinity vary from a decrease of 0.6% per year to an increase of 0.5% per year with a median rate of 0.1% decrease per year.

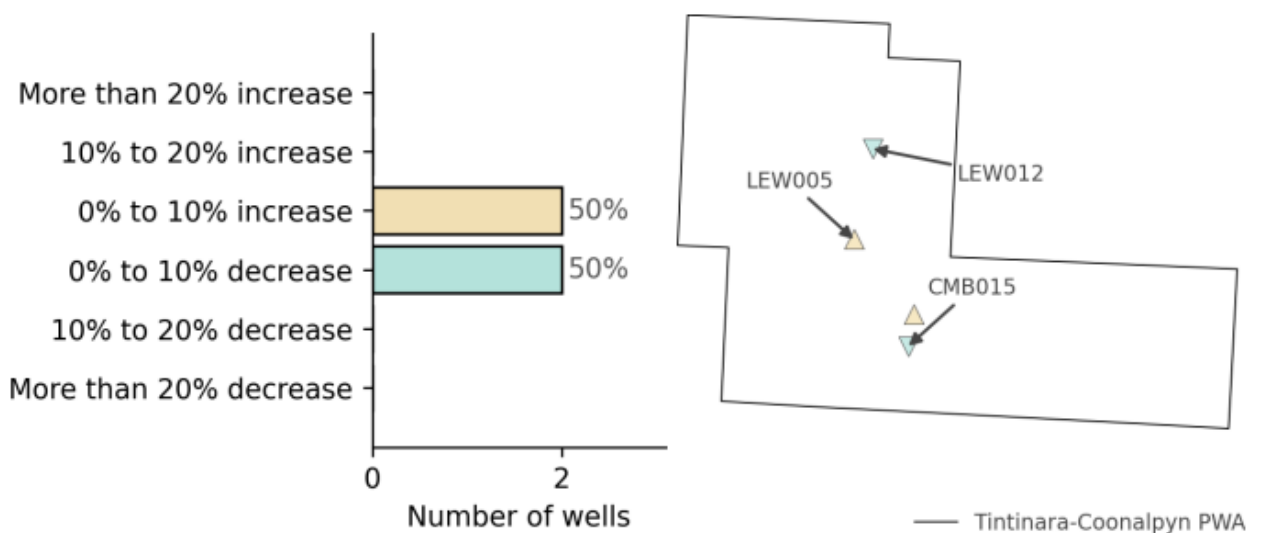


Figure 4: Salinity trend in the 10 years to 2021 for wells in the unconfined aquifer in the Tintinara-Coonalpyn and Tatiara PWAs (DEW, 2021)

Tintinara-Coonalpyn salinity trends (unconfined aquifer)

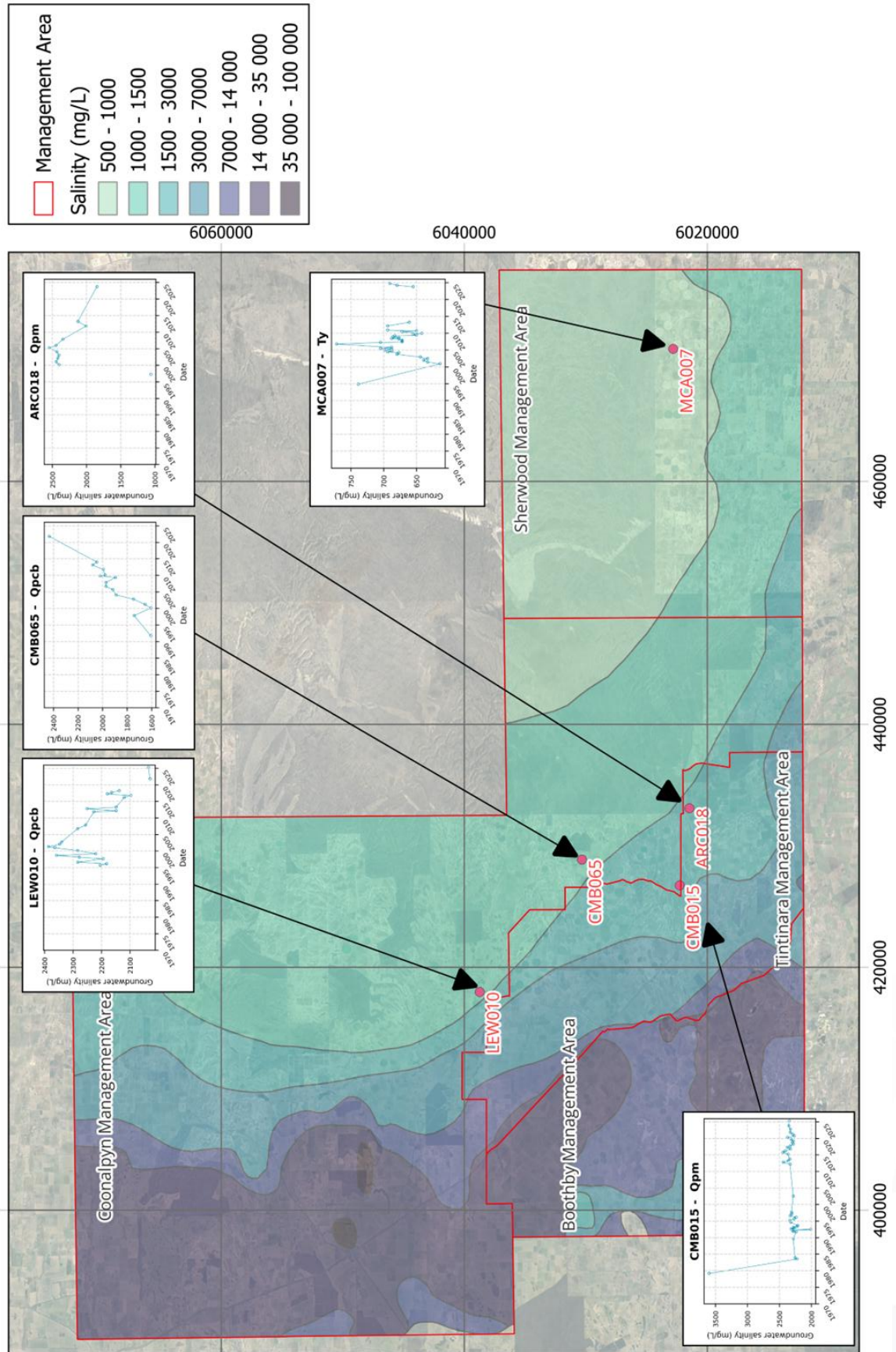


Figure 5: Indicative salinity contour maps for the unconfined aquifer in the Tintinara Coonalpyn PWA (DEW, 2025)

Confined aquifer

Current salinity monitoring observation wells

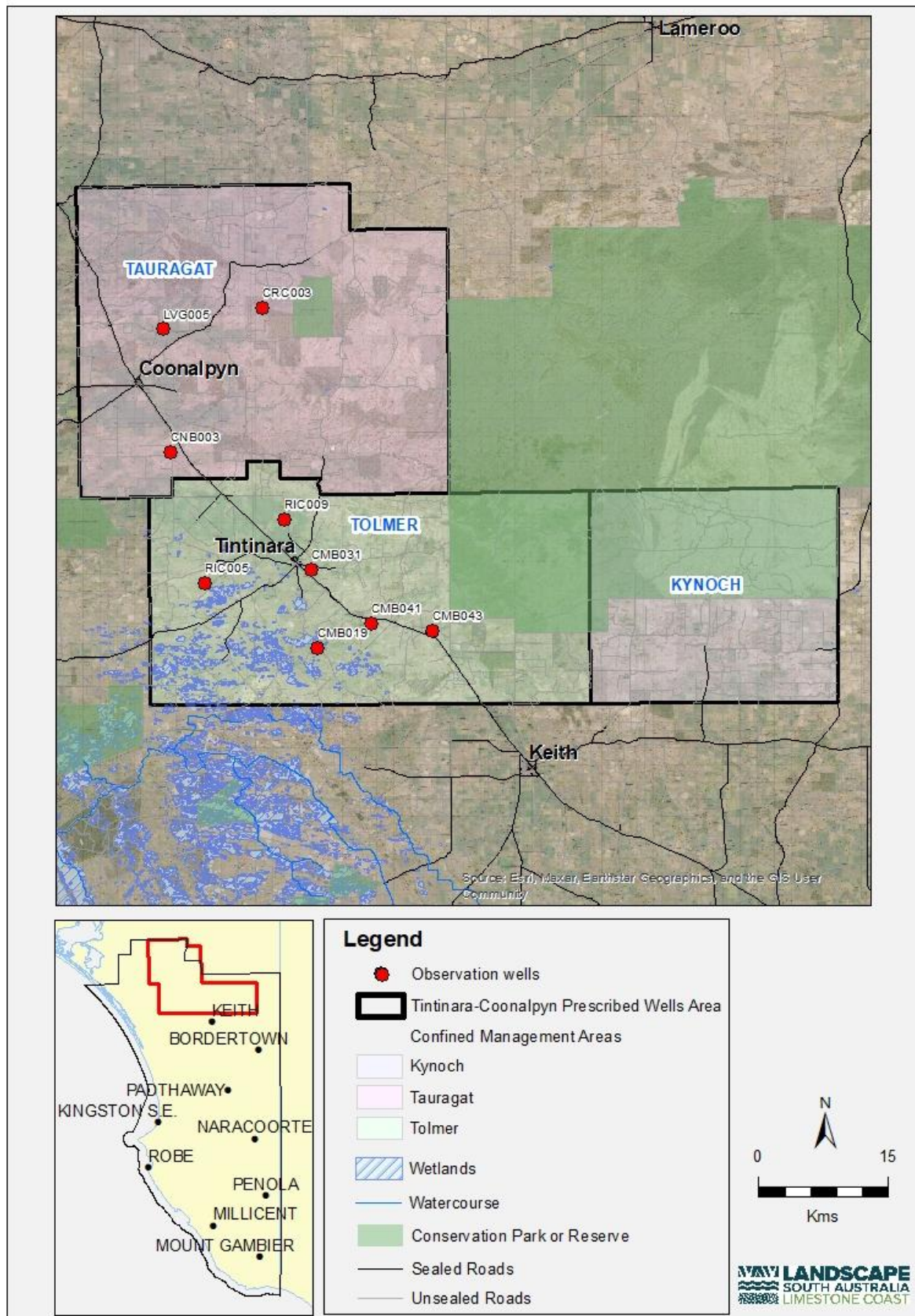
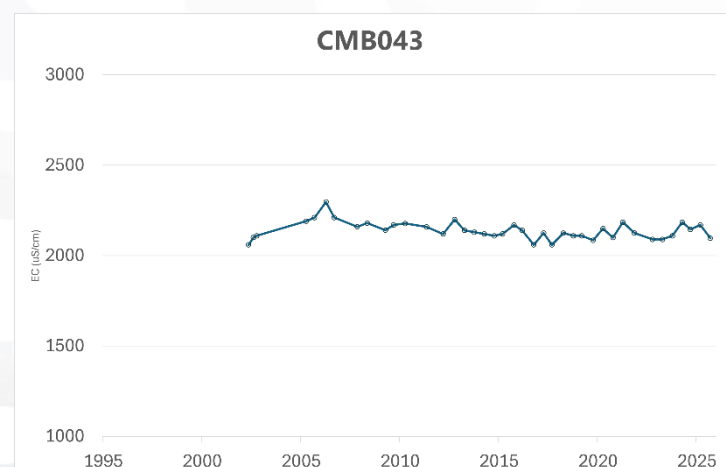
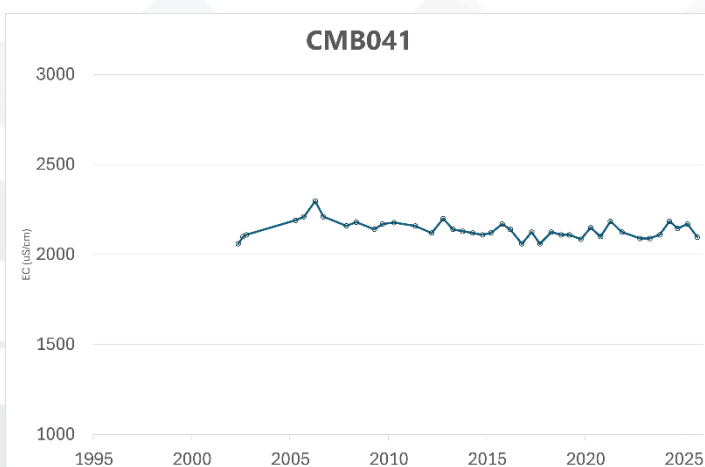
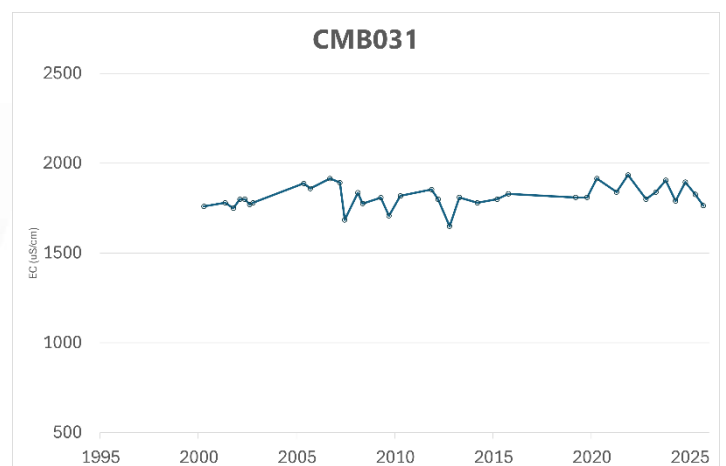
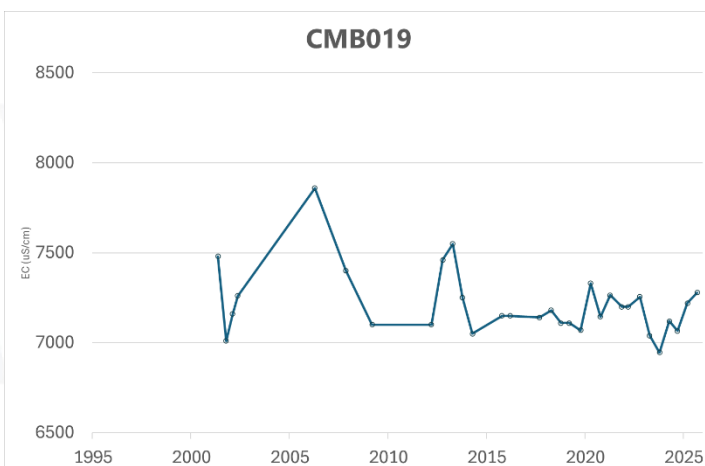
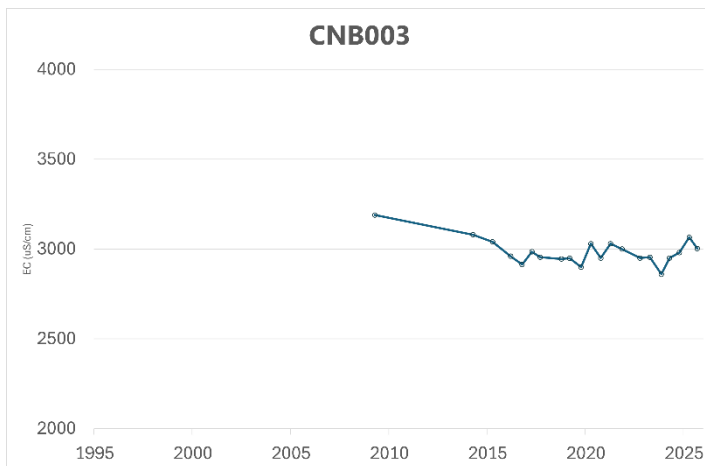


Figure 6: Map of current salinity monitoring observation wells in the confined aquifer in the Tintinara Coonalpyn PWA.

Confined aquifer Salinity level hydrographs

Data sourced from WaterConnect for nine (9) current observation wells for Tintinara Coonalpyn PWA monitored since 2021. Data classified as anomalous has been removed. Graphs are shown in EC ($\mu\text{S}/\text{cm}$). To get an approximate ppm or mg/L equivalent, times (x) EC ($\mu\text{S}/\text{cm}$) by 0.55.



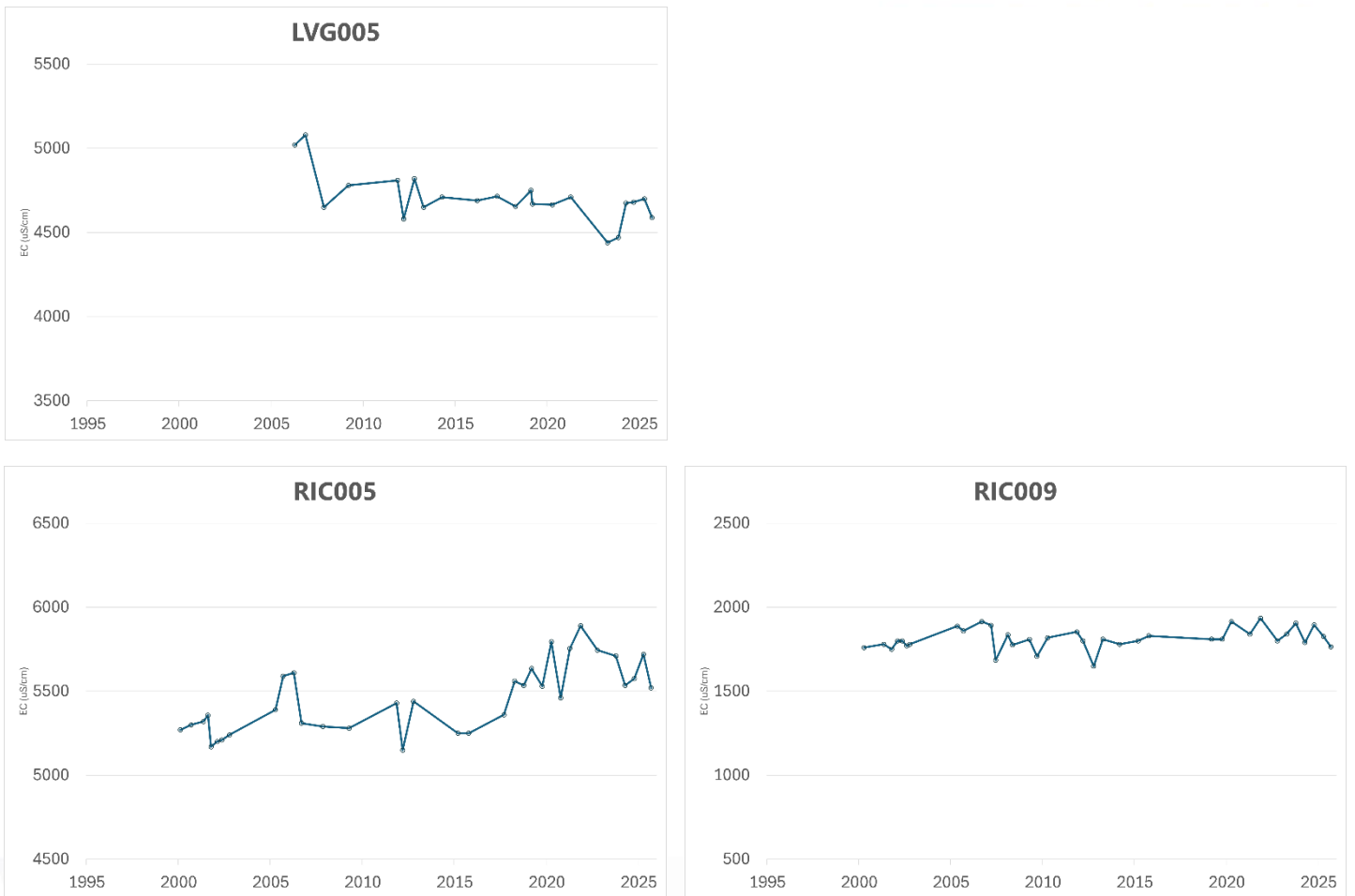


Figure 7: Salinity hydrographs for wells in the confined aquifer in the Tintinara Coonalpyn PWA (Hundreds of Livingston (LVG), Carcuma (CRC), Coneybeer (CNB), Richards (RIC), Coombe (CMB)).

Confined aquifer 2024 Salinity update

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.

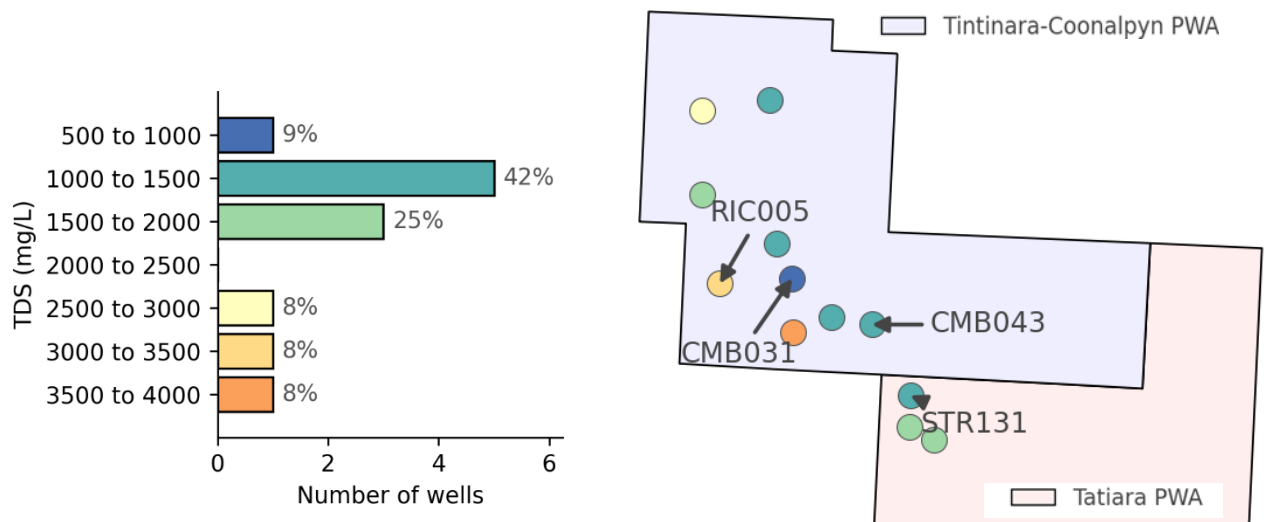


Figure 8: 2024 salinity observations from wells in the confined aquifer in the Tintinara-Coonalpyn and Tatiara PWAs (DEW, 2025).

In the 10 years to 2024, 6 of 11* wells (54%) across Tintinara Coonalpyn and Tatiara PWA 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.

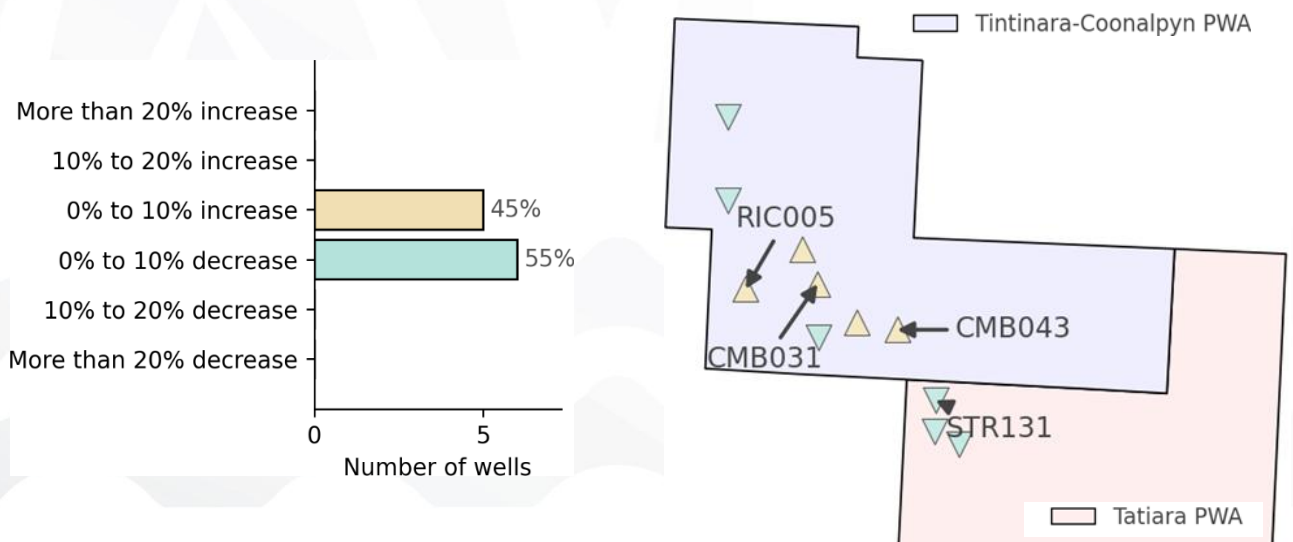


Figure 9: Salinity trend in the 10 years to 2024 for wells in the confined aquifer in the Tintinara-Coonalpyn and Tatiara PWAs (DEW, 2025).

*3 of the wells reported on during this period are located in the adjacent Tatiara PWA as shown in the supporting figures.

Tintinara-Coonalpyn salinity trends (confined aquifer)

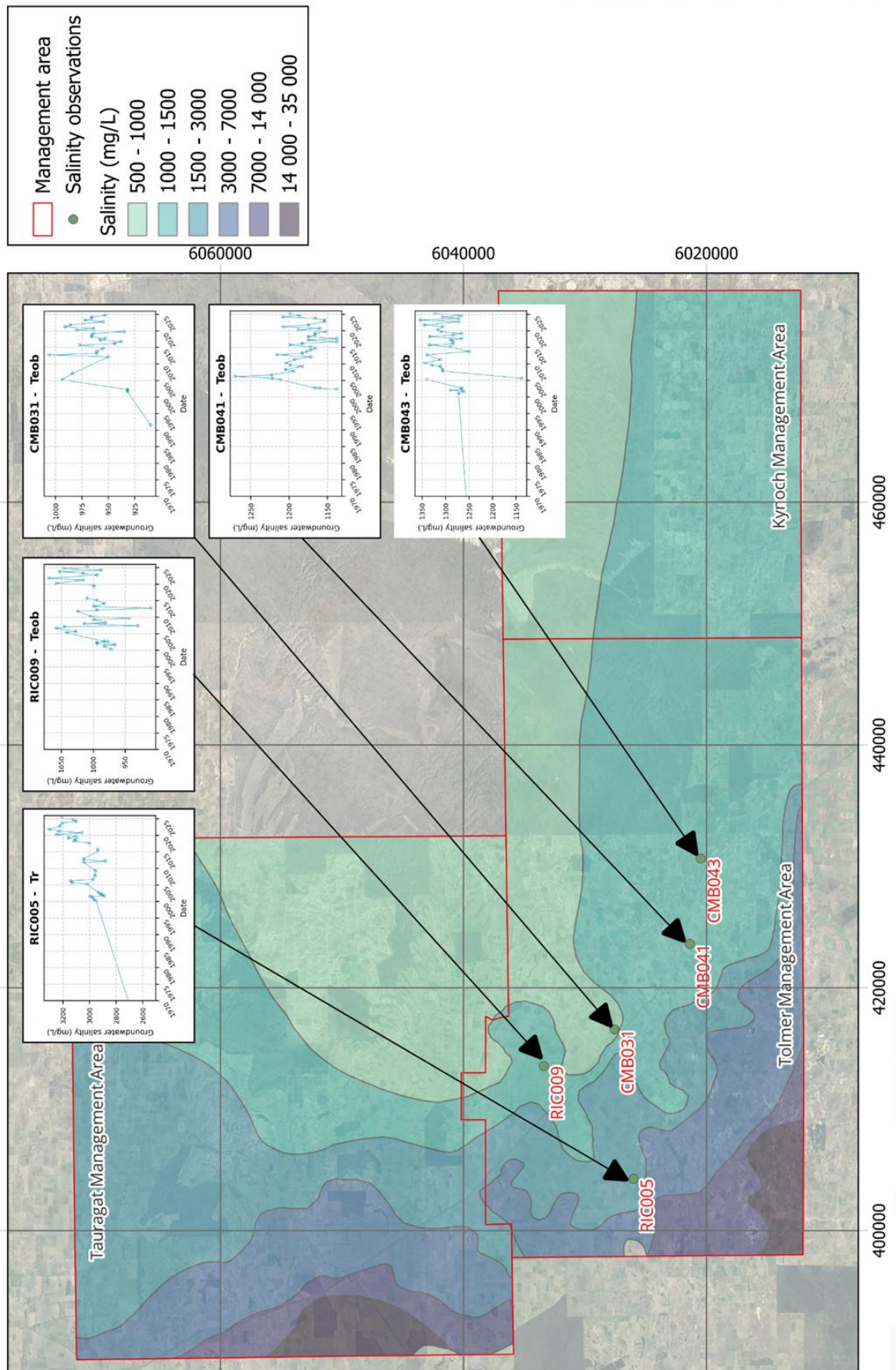


Figure 10: Indicative salinity contour maps for the confined aquifer in the Tintinara Coonalpyn PWA (DEW, 2025).

How the review will consider salinity monitoring

There is a need to refer to 'best available science' for this review. Current and available data will be used. Any recommendations on gaps in monitoring will form part of the review process. Stakeholders will have differing needs and expectations of the monitoring network. Recommendations on salinity monitoring will need to be clear as to what the salinity data will be used for and what it will need to inform.

The Stakeholder Advisory Group can provide recommendation/s to the LC Landscape Board as part of the evaluation phase of the review. This could include:

- their view of monitoring appropriateness based on local knowledge and expertise of areas of development.
- their view on licence holder reporting for salinity.
- whether the Plan met its monitoring objectives.

The Department for Environment and Water (DEW) can also provide their assessment and/or recommendation of monitoring representativeness across the PWA as part of the evaluation phase of the review.

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

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