

# Katherine-Daly-Roper Regional Update

## December 2023

This update provides information on the predicted and actual river flows in 2023-2024, and provides an outlook for 2024-2025, for the Katherine, Daly and Roper water resource systems.

### Looking back

#### 2023 Announced allocation outcomes

In April 2023 the Controller of Water Resources announced 100 per cent allocations for water resources in the Katherine, Daly and Roper regions. This announcement was informed using modelling of predicted river flows to ensure environmental flow thresholds would be met at the end of the dry season.

A comparison of modelled river flows and measured flows at 1 November 2023 are shown in Figure 1 below. Minimum environmental flow thresholds, which correspond to the ecological functioning of the water resource, have been set for sites located at Wilden (1.6 m<sup>3</sup>/s), Dorisvale (6 m<sup>3</sup>/s), Theyona (12 m<sup>3</sup>/s) and Mount Nancar (12 m<sup>3</sup>/s).<sup>1</sup>

- ✓ At all reporting locations the measured river flows were greater than the modelled predicted flows. This was partly due to rainfall that occurred after the April announcement.
- ✓ Both measured and modelled predicted flows exceeded the minimum environmental flow thresholds at all reporting locations during the 2023 dry season.

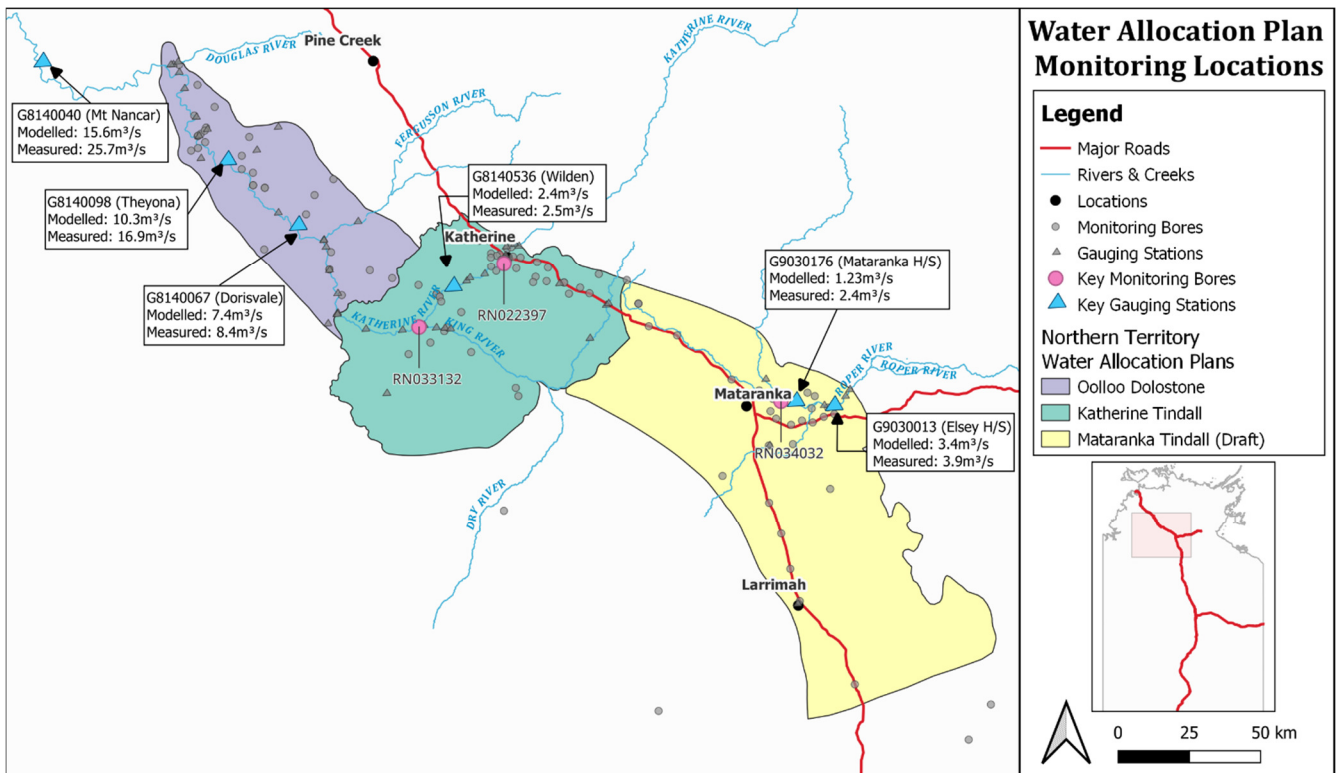


Figure 1 Comparison of modelled predicted river flows and measured flows at 1 November 2023

<sup>1</sup> The Mataranka Tindall Limestone Aquifer Water Allocation Plan is currently under development

# 2023 Water use

Licensed water extraction reported across the regions for the period 1 May to 30 November 2023 has remained relatively consistent with the same period of the previous year, as shown in Figure 2.

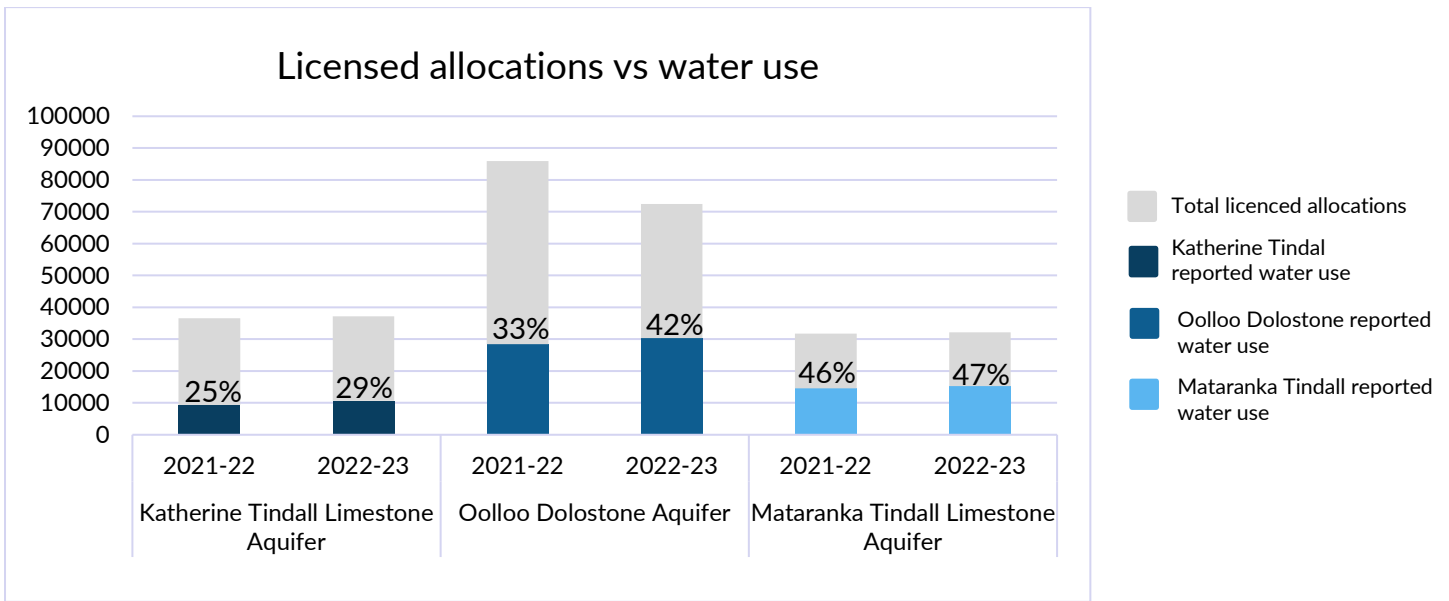


Figure 2 Comparison of reported water use

## Rainfall outlook

The BoM climate outlook for the 2023-2024 northern Wet season as at 6 December 2023 are for **below median rainfall in December and median rainfall from January to March** across the Northern Territory.

### Recent Rainfall

Conflicting climate drivers have led to mixed rainfall conditions across the Northern Territory since September, resulting in median rainfall conditions up to 1 December 2023, with the exception of the north-west Top End, including Darwin, which experienced below median rainfall for the period. Figure 3 show rainfall deciles for the 3-month period to 1 December 2023.

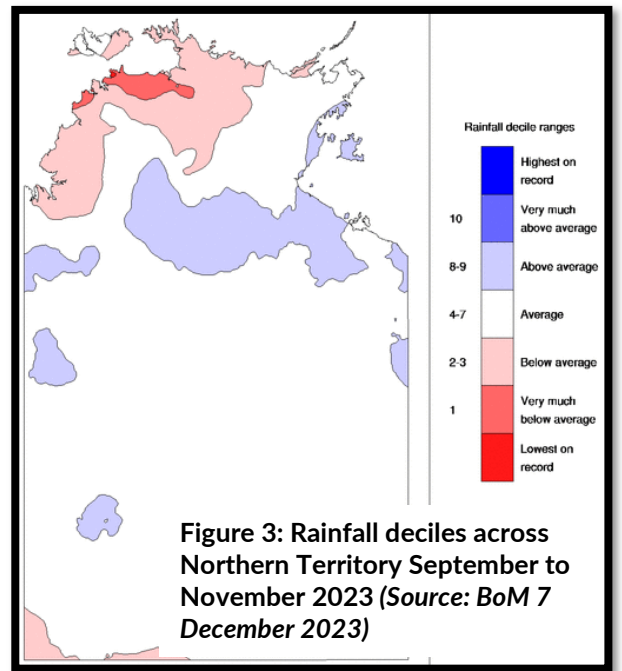
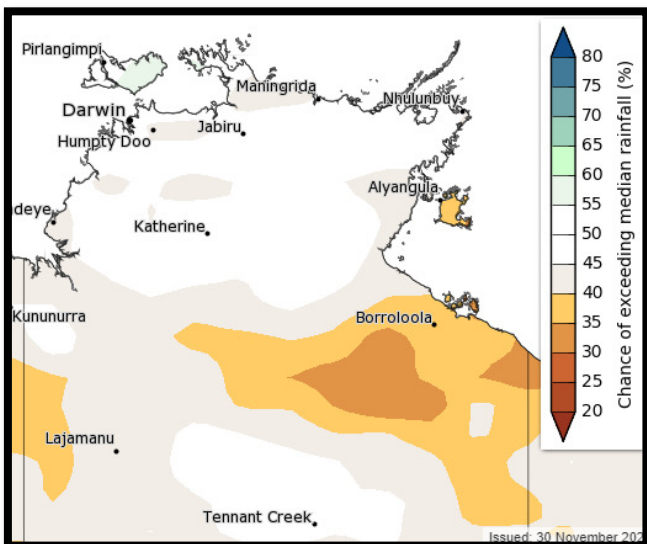


Figure 3: Rainfall deciles across Northern Territory September to November 2023 (Source: BoM 7 December 2023)



### Climate Outlook

BoM predictions are for **below median rainfall** across the Northern Territory during **December**, with **median rainfall** conditions across the Northern Territory between **January and March 2024**. Figure 4 shows rainfall outlook for the area north of Tennant Creek, for the period of January to March 2024.

Figure 4: Chance of median rainfall January-March 2024 (Source: BoM 7 December 2023)

## Groundwater levels

Groundwater levels in the Katherine, Ooloo and Mataranka water allocation plan areas are higher than the same time last year. Higher groundwater levels in 2023 are due to the 2022-2023 wet season which provided greater total rainfall, as well as rainfall occurring later in the year, with unseasonal rainfall in July 2023.

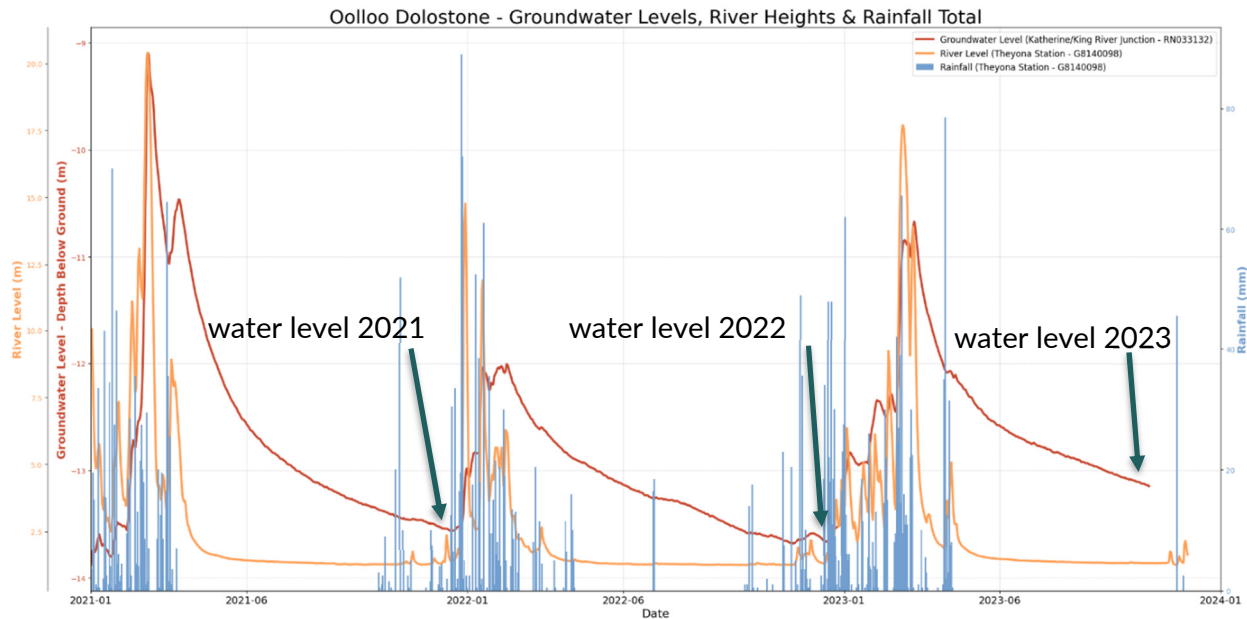


Figure 5. Groundwater levels for a representative bore in the Ooloo Dolostone Aquifer (last 3-years)

## Looking forward

### 2024 Water licence allocations

The Controller of Water Resources will provide advice to relevant licence holders on their 2024-2025 annual announced allocation before 1 May 2024.

With the median rainfall outlook provided by the BoM and the existing higher groundwater levels, it is **likely** that allocations for the 2024-2025 year will be 100 per cent in the following water resources:

- ✓ Katherine Tindall Limestone Aquifer
- ✓ Mataranka Tindall Limestone Aquifer
- ✓ Flora Tindall Limestone Aquifer
- ✓ Ooloo Dolostone Aquifer
- ✓ Jinduckin Formation
- ✓ Edith River
- ✓ Adelaide River
- ✓ Katherine River upstream of Donkey Camp weir

Modelling will be undertaken in January 2024 to inform an Early Notice to licence holders in February 2024, and again in March and April 2024 to inform a decision and announcement by the Controller of Water Resources, before 1 May 2024.

## Contact us

If you have any enquiries about this update, please contact Water Resources on 08 8999 4455 or by emailing [waterresources.DEPWS@nt.gov.au](mailto:waterresources.DEPWS@nt.gov.au).