STATE OF THE WATER RESOURCE

Katherine

2024-25

Department of
Lands, Planning and Environment

NORTHERN TERRITORY GOVERNMENT

This report provides information about the current status of the water resource, how water is shared and used, and the activities that were undertaken to manage water during 2024-25.

WATER CONTROL DISTRICT

DALY ROPER BEETALOO

WATER RESOURCE

TINDALL LIMESTONE AQUIFER

PLAN AREA

5,951 KM2

MAJOR TOWN

KATHERINE

ABORIGINAL LANDS

JAWOYN, DAGOMAN AND WARDAMAN COUNTRY

ACKNOWLEDGEMENT

The Department of Lands, Planning and Environment proudly acknowledges the Northern Territory's Aboriginal communities and their rich culture and pays respect to the Elders past and present. We acknowledge Aboriginal peoples as the Traditional Owners and custodians of the lands and waters on which we all rely.

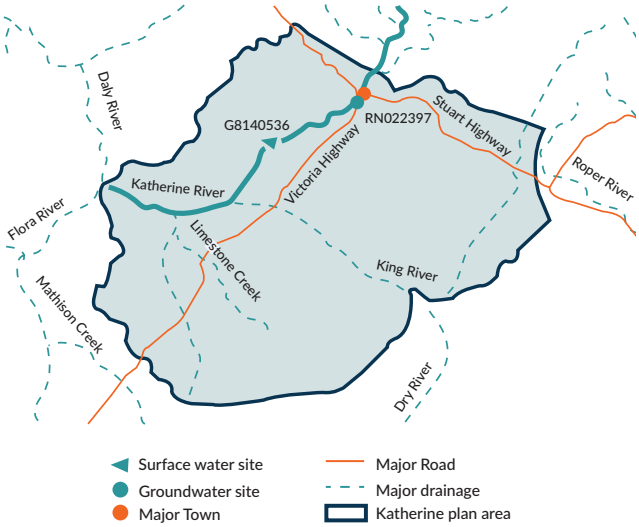
Front cover image: Mango farm

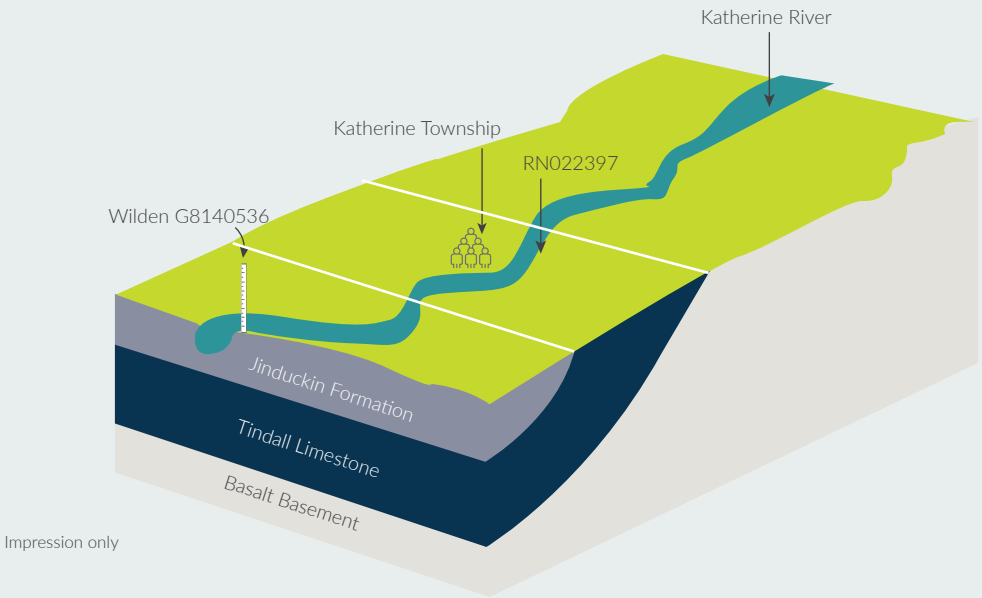
The Katherine water allocation plan (the plan) manages groundwater in the Katherine Tindall Limestone aquifer within the Daly Roper Beetaloo water control district.

The plan outlines how groundwater in the Tindall Limestone aquifer, within the Katherine River catchment, is managed. The aquifer provides a dependable source of good quality[1] water with strong bore yields. As a result, it is a vital resource for both the local community and the environment.

Groundwater from the aquifer feeds into the Katherine River through the riverbed and natural springs, including the Katherine Hot Springs.

The plan sets out how water should be allocated among competing demands and establishes clear management objectives. Given the high demand for water in the region, effective management is essential to balance the social, economic and environmental values of the water resource.





KATHERINE TINDALL LIMESTONE AQUIFER

AVERAGE ANNUAL RECHARGE
71,000 ML/YR

ESTIMATED SUSTAINABLE YIELD (ESY)
38,391 ML/YR

The department has an extensive understanding of the aquifer and surface water connectivity. The department maintains 50 monitoring sites in the plan area, including 40 bores and 10 surface water sites. All monitoring locations are visited each year, with the monitoring data used in an integrated groundwater and surface water model[2].

The model allows us to predict what might happen to the water resource under different climate and water extraction scenarios. To view monitoring data across the Northern Territory, visit the water data portal[3].

1 Good quality indicates groundwater salinity less than 1000 mg/L
2 https://territorystories.nt.gov.au/10070/827500
3 https://ntg.aquaticinformatics.net

WATER THAT STAYS IN THE ENVIRONMENT

ESTIMATED SUSTAINABLE YIELD
38,391 ML/yr

1. **RURAL STOCK AND DOMESTIC***
   1,964 ML/yr
2. **PUBLIC WATER SUPPLY**
   4,076 ML/yr
3. **ABORIGINAL WATER RESERVE**
   3,235 ML/yr
4. **ECONOMIC DEVELOPMENT**
   29,096 ML/yr

** Rural stock and domestic usage is unlicensed and extractions estimated*

HOW WATER IS SHARED

The plan outlines how water is shared within the plan area. It safeguards ecological needs by allocating the majority of water to the environment. A portion of the available water is allocated for consumptive use, termed the estimated sustainable yield (ESY).

Visit our website to read about how announced water allocations[4] are used to ensure their thresholds are met.

The remaining portion of the ESY is allocated for economic development. The volume of water available for economic development is determined each year through announced allocations, reducing take volumes in dry years and giving the full allocation in wet years.

CLIMATE AND WATER

The 2024-25 wet season produced slightly above average rainfall and river flows. There was also above average recharge to the aquifer.

The Katherine plan area is within the Top End climate zone, experiencing clear wet and dry seasons. Rivers in the Top End typically have high flows during the wet season and low flow during the dry. Aquifers generally fill during the wet and decline during the dry season. Learn more about how resources in the Top End compared to the Arid Zone[5].

4 https://nt.gov.au/environment/water/management-security/water-plan/announced-water-allocations
5 https://territorystories.nt.gov.au/10070/843257

RAINFALL AND RIVER FLOWS

The 2024-25 season recorded 1,219 mm of rain at the Katherine Railway Bridge (G8140001) monitoring site. This is above the annual average rainfall of 969 mm.

River flows are closely related to rainfall in the plan area. Flows have been measured at the Wilden monitoring site (G8140536) on the Katherine River since 2008. End of dry season flow is the most representative measurement of seasonal change in the river system.

End of dry season flow at Wilden for 2024-25 was 263.5 ML per day. The 'river flows' graph shows the predicted and measured flows for the last five years. In most years the department's model prediction is less than or similar to measured flows.

RAINFALL
KATHERINE RAILWAY BRIDGE

AVERAGE (1990-2025)	MEASURED 2024-25
969 mm/yr	1,219 mm/yr

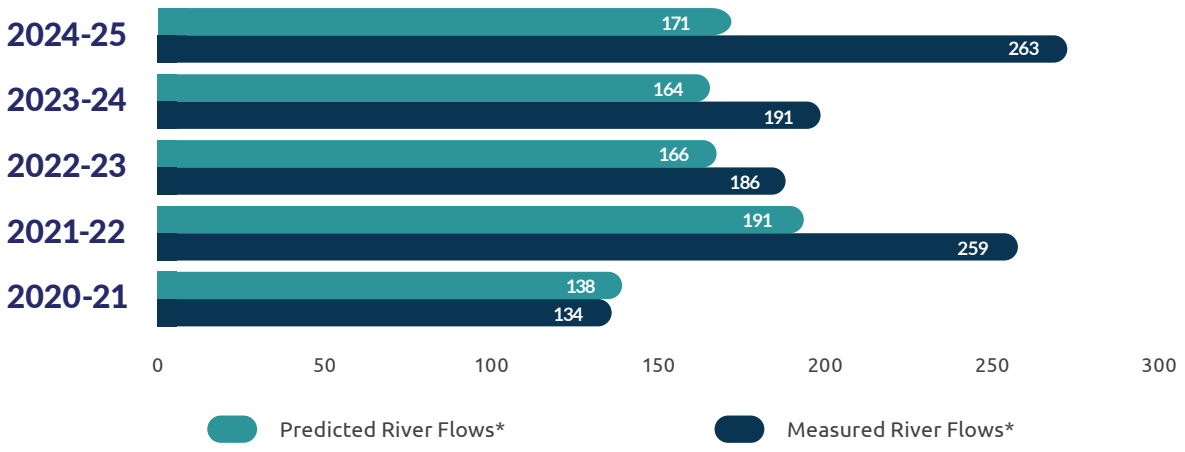
mm = millimetres

RIVER FLOWS
MEASURED AT WILDEN

PREDICTED 2024-25	MEASURED 2024-25
171 ML/day	263 ML/day

ML = megalitres

KATHERINE RIVER FLOWS



* End of dry season ML/day

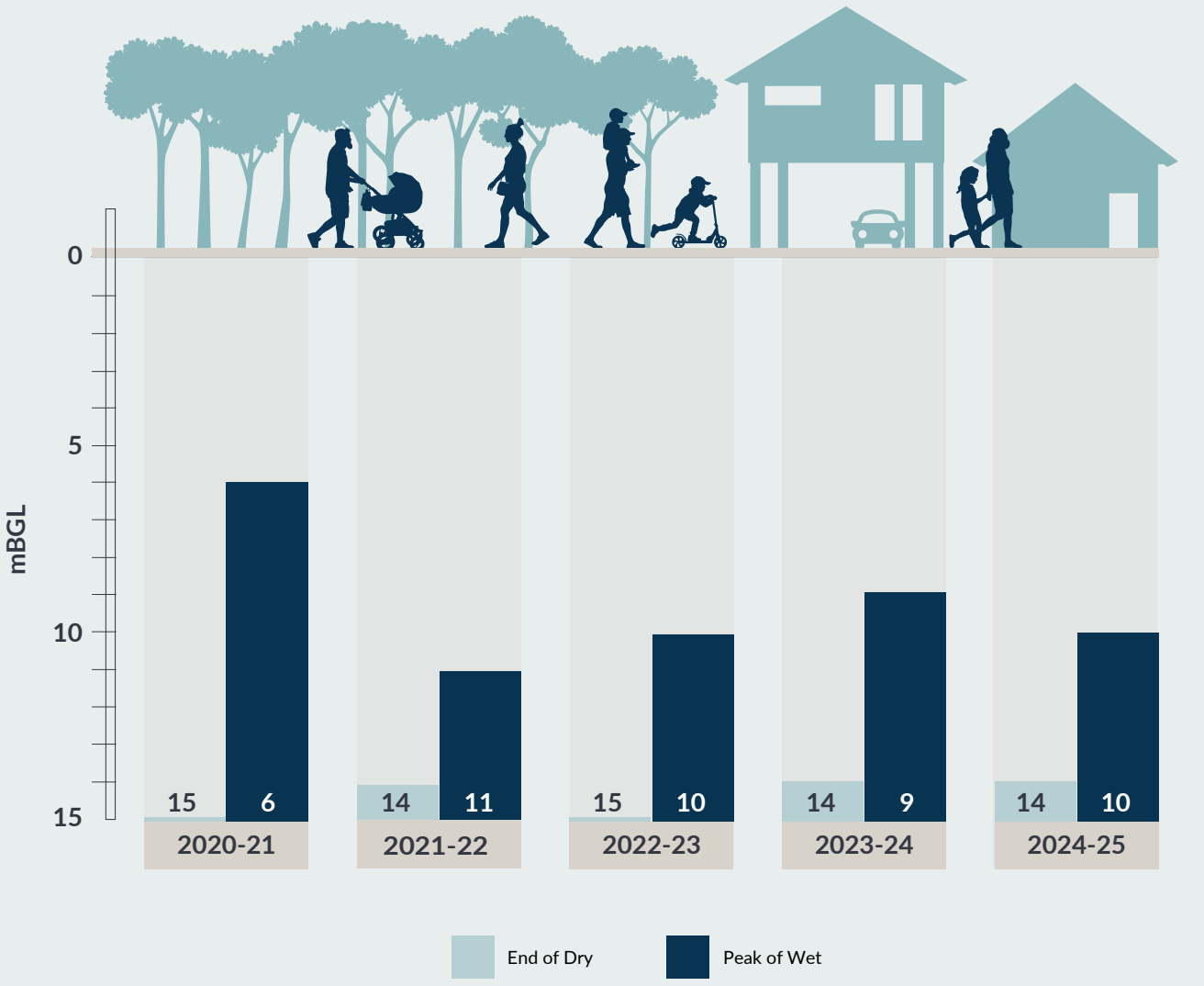
GROUNDWATER LEVELS

Groundwater level monitoring indicates that the water resource is strongly influenced by seasonal climate patterns, typically rising during the wet season and declining in the dry season. The 2024–25 wet season resulted in an average rise in groundwater levels across the plan area.

The graph below shows groundwater levels at a site south of the Katherine River (RN022397). Groundwater level is measured in depth, metres below ground (mBGL). The 2024-25 wet season predicted a rise in groundwater levels of approximately 4 m, as measured at RN022397.

GROUNDWATER QUALITY

Contamination from per- and polyfluoroalkyl substances (PFAS) was initially identified in and around RAAF Base Tindal in November 2018. Since then, a PFAS treatment plant has been established to remove these substances from the local drinking water supply. Additional details about groundwater quality monitoring are available on the Department of Defence website[6].



6 https://www.defence.gov.au/about/locations-property/pfas/pfas-management-sites/raaf-base-tindal

REGULATING WATER USE

No new water licences were granted this financial year. To see water licences in the plan area visit the water licence portal[7].

The number of water extraction licences has increased on last year due to an amendment of a licence which was previously considered to be in Oolloo plan area.

During 2023-24 almost 6,000 ML was recovered from unused licence water entitlements in the Katherine region with a further 100 ML in 2024-25, fully provisioning the Aboriginal water reserve and making water available to support new and expanding development.

Overall, substantially less water is being used by water licence holders than has been granted which provides opportunities for water trading in the region.

Visit the website to find out more about how to trade water[8].

The department regulates water licence holders to ensure compliance with the conditions of the licence. Regular audits and checks of licence records are undertaken to identify breaches of licences.

Visit the website to find out more about compliance and enforcement[9].

WATER LICENCE STATISTICS 2024–25

WATER EXTRACTION LICENCES	76
VOLUME OF WATER LICENSED FOR ECONOMIC USE	30,310 ML
VOLUME OF WATER AVAILABLE	6,097 ML
LICENCE DECISIONS MADE*	11
LICENCES TRANSFERRED OWNERSHIP	0

WATER COMPLIANCE STATISTICS 2024–25

LICENSED WATER USED	40%
LICENCES REPORTING WATER USE	97%
LICENCES METERED	97%
LICENCE INSPECTIONS	10
COMPLIANCE ACTIVITIES**	9

*amendments, trades, renewals

**warning letters, infringements and other site inspections

WATER MANAGEMENT

Water management needs to adapt and improve over time. To do this, the plan identifies strategies and actions about the sharing of water. Key management actions taken this year are outlined below.

RECENTLY COMPLETED ACTIVITIES

The Katherine plan will expire on 15 February 2026. The department is undertaking extensive stakeholder consultation in preparation for a new Katherine water allocation plan 2026-2036.

On 1 November 2024 the Daly River water advisory committee met for the first time and have continued to meet again in March 2025 and May 2025.

KEY PRIORITIES FOR THE FUTURE

- Declare a new plan for Katherine, that will set the strategy for water use, further scientific investigation and investment for the next 10 years.

7 https://nt.gov.au/environment/water/licensing/licensing-portal

8 https://nt.gov.au/environment/water/licensing/water-extraction-licence/water-trading

9 https://depws.nt.gov.au/consultation-publications/water-licensing-policies

NORTHERN TERRITORY GOVERNMENT

State of the water resource 2024-25

Katherine

For more information visit
Katherine Tindall Limestone Aquifer water allocation plan | NT.GOV.AU