



# STATE OF THE WATER RESOURCE

Berry Springs

2024-25



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.



● Plan area

**WATER CONTROL DISTRICT**  
**DARWIN RURAL**  
**ADELAIDE RIVER**

**WATER RESOURCE**  
**BERRY SPRINGS**  
**DOLOSTONE AQUIFER**

**PLAN AREA**  
**105 KM<sup>2</sup>**

**MAJOR TOWN**  
**BERRY SPRINGS**

**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: Berry Springs

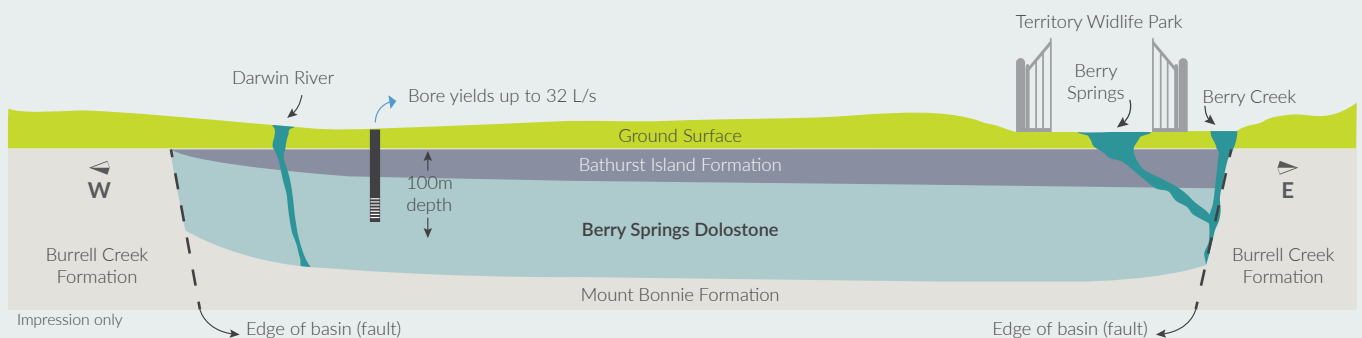
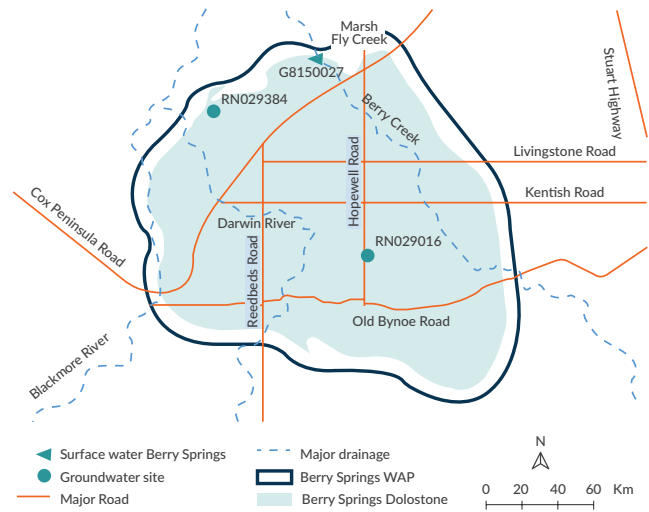
## The Berry Springs water allocation plan (the plan) manages the Berry Springs Dolostone Aquifer in the Darwin Rural Adelaide River water control district.

The aquifer is strongly connected to surface water flow and discharges at Berry Springs. Groundwater in the aquifer provides reliable, good quality<sup>1</sup> water. Bore yields are high, meaning this is an important resource for the community and environment.

The aquifer is small and oval shaped and is typical of karstic aquifers where water is flowing mainly in dissolved cracks and caves within the dolostone. It discharges at several springs sustaining stream flow in Darwin River and Berry Creek throughout the dry season. Water from the aquifer also sustains important ecosystems such as monsoon vine thicket, culturally significant sites to the Kungarakan and Larrakia people, and flows at Berry Springs nature park.

The plan tells us how water should be shared between competing uses and sets objectives for management.

Water in the plan area is in high demand so it is important that water is managed effectively.



## BERRY SPRINGS DOLOSTONE



**AVERAGE ANNUAL RECHARGE**  
44,600 ML/yr



**ESTIMATED SUSTAINABLE YIELD (ESY)**  
8,920 ML/yr

The department has a good understanding of the water resource and maintains 20 monitoring sites, including 14 bores and 6 surface water sites in the plan area. All monitoring locations are visited each year, with monitoring data used in a groundwater model.

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](#)<sup>2</sup>.

<sup>1</sup> Good quality indicates groundwater salinity less than 1000 mg/L  
<sup>2</sup> <https://ntg.aquaticinformatics.net/>

# WATER THAT STAYS IN THE ENVIRONMENT

ESTIMATED SUSTAINABLE YIELD

**8,920** ML/yr

**1** RURAL STOCK AND DOMESTIC\*



**1,005** ML/yr

**2** PUBLIC WATER SUPPLY



**0** ML/yr

**3** ABORIGINAL WATER RESERVE\*\*



**890** ML/yr

**4** ECONOMIC DEVELOPMENT



**7,025** ML/yr

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

\*\* The Aboriginal Water Reserve is notional - There is no water currently available in the reserve





## HOW WATER IS SHARED

The plan protects aquatic ecosystems by reserving a majority of water for the environment.

The plan determined that up to 8,920 ML per year can be taken sustainably (estimated sustainable yield).

There is no water allocated to public water supply in the plan because there is no reticulated water supply within the plan area.

Domestic water use is captured in the rural stock and domestic allocation which is estimated and unlicensed.

As the region was already developed at the time of the plan being declared, water in the Aboriginal water reserve is notional and not available at this time. Work is being done to address this for a future plan. The remaining water is allocated to support economic development.

## CLIMATE AND WATER

The Berry Springs Dolostone Aquifer behaves as a Top End resource, with distinct wet and dry seasons. During the wet season, rainfall recharges the aquifer. As the aquifer fills it discharges excess water via springs to the surface, maintaining flows in the creeks throughout the dry season. Find out more about how resources behave in the Top End compared to the Arid Zone [here](#)<sup>3</sup>.

## RAINFALL AND CREEK FLOWS

The 2024-25 season recorded 1,549 mm of rain at Berry Creek. This is above the average rainfall of 1,526 mm per year recorded at the same site.

Creek flows are closely related to rainfall in the plan area. End of dry season flow is the most representative measurement of seasonal changes in the aquifer.

Each year at the end of the wet season the department uses the groundwater model to predict the flows in the creek for the upcoming dry season. In most years the departments model prediction is similar to actual flows, showing a good understanding of the resource.



### RAINFALL

AVERAGE  
(1900-2025)

**1,526**

mm/yr

MEASURED  
2024-25

**1,549**

mm

mm = millimetres



### CREEK FLOWS MEASURED AT MARSH FLY WEIR

PREDICTED  
2024-25

**14**

ML/day

MEASURED  
2024-25

**11**

ML/day

ML = megalitres

<sup>3</sup> <https://digitalnt.nt.gov.au/10070/843257/0/17> Territory Stories - Classification of the Top End and Arid Zone for Northern Territory water resources

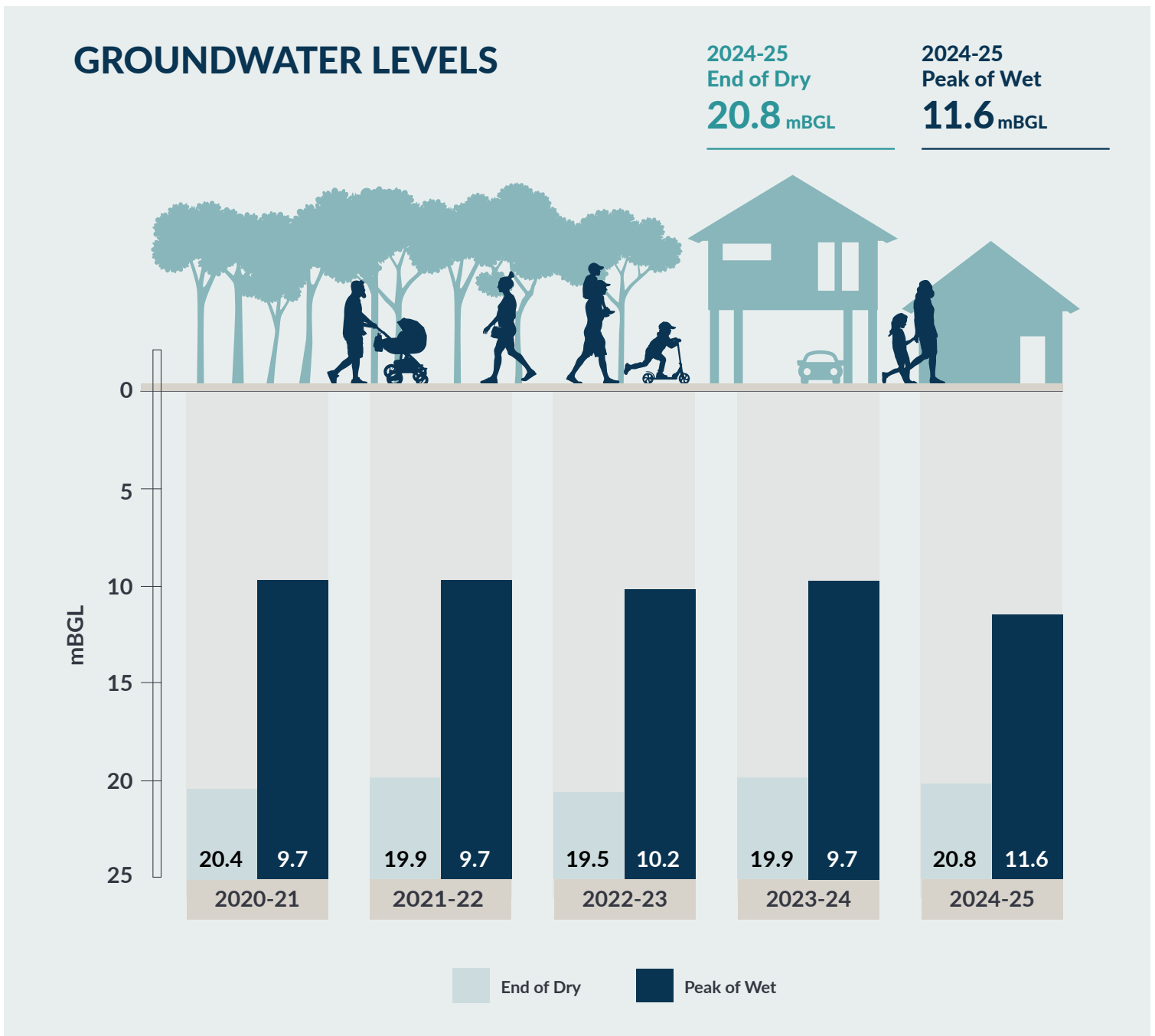
## GROUNDWATER LEVELS

Groundwater level monitoring shows changes to groundwater storage in the aquifer in response to climate variables and water extraction. Groundwater levels are measured in depth metres below ground level (mBGL). Groundwater levels generally rise in the wet season and fall during the dry season.

The 2024-25 wet season resulted in a slightly lower than average rise in groundwater levels. The groundwater levels graph shows groundwater levels responding to rainfall, at a site near Hopewell Road (RN029016). The 2024-25 wet season resulted in a rise in groundwater levels of 8.6 m.

You can view groundwater levels for the plan area at any time throughout the year on an interactive platform dedicated to the Darwin Rural region called the Darwin Rural Area Groundwater Watch [here](#)<sup>4</sup>.

Monitoring data is updated at the end of each month.



<sup>4</sup> <https://nt.gov.au/environment/water/water-in-the-nt/groundwater/groundwater-in-darwin-rural-area>

## REGULATING WATER USE

All water available for economic development in the plan area has been licensed and as a result, no new licences were granted this financial year.

To see water licences in the plan area visit the [water licence portal](#)<sup>5</sup>.

A recovery of unused water campaign has commenced. This aims to recover unused water from water licence holders. This will provide an opportunity to reallocate water. Opportunities for water trading is available in the region.

You can find out more about how to trade water [here](#)<sup>6</sup>.

The department regulates water licence holders to ensure compliance with the conditions of their licence. Regular audits and checks of licence records are undertaken to identify breaches and non compliance. You can find out more about compliance and enforcement [here](#)<sup>7</sup>.

## WATER LICENCE STATISTICS 2024-25



WATER EXTRACTION LICENCES	57
VOLUME OF WATER LICENSED FOR ECONOMIC USE	8,735 ML
VOLUME OF WATER AVAILABLE	0 ML
LICENCE DECISIONS MADE*	5
LICENCES TRANSFERRED OWNERSHIP	0

## WATER COMPLIANCE STATISTICS 2024-25



LICENSED WATER USED	31%
LICENCES REPORTING WATER USE	96%
LICENCES METERED	98%
LICENCE INSPECTIONS	11
COMPLIANCE ACTIVITIES**	4

\*amendments, trades, renewals  
\*\*warning letter

## 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

Over the last year there were a number of site investigations undertaken to verify the location of groundwater dependent ecosystems that were identified via satellite imagery. Groundwater dependent ecosystems probability map for the area was developed and released to the community. Find out more [here](#)<sup>8</sup>.

### KEY PRIORITIES FOR THE FUTURE

- Complete a recovery of unused water policy, with priority allocation to the Aboriginal water reserve.
- The Darwin Rural Water Regulation Strategy 2023-26 can be found [here](#)<sup>9</sup>.
- Declare the new Berry Springs water allocation plan in late 2026.

5 <https://nt.gov.au/environment/water/licensing/licence-and-notice-portals> - Water licence and notice portals | NT.GOV.AU

6 <https://nt.gov.au/environment/water/licensing/water-extraction-licence/water-trading> - Water trading | NT.GOV.AU

7 <https://nt.gov.au/environment/water/management-security/water-policies-and-guidelines> - Water policies and guidelines | NT.GOV.AU

8 <https://territorystories.nt.gov.au/10070/992748>

9 <https://nt.gov.au/environment/water/management-security/water-control-districts/darwin-rural/darwin-rural-water-regulation-strategy>



**STATE OF THE WATER RESOURCE 2024-25**  
Berry Springs



For more information visit  
[Berry Springs water allocation plan | NT.GOV.AU](https://www.nt.gov.au/water/berry-springs)