

Key messages: Western Davenport water allocation plan documents

These messages have been prepared to assist people in understanding the main features of the Western Davenport Water Allocation Plan 2024–2034 (the plan) and answer likely questions. The plan has been declared with two accompanying documents, a Background Report describing the water resource information used to inform the plan; and Implementation Actions that describes the actions required to ensure for ongoing management, in the plan area.

Key messages:

- A water plan sets out the volume of water that must be protected to ensure the environmental requirements of the resource are met. It defines the volume of water available for use, which is known as the estimated sustainable yield or ESY. Water plans also set out management rules for water licensing, use and trade.
- The Western Davenport region has vast groundwater resources. The largest and most productive is the Central Plains, which holds an estimated 138 million mega litres.
- The plan:
 - allows a maximum of 87,700 ML per year to be taken from the groundwater, for the next 10 years
 - is based on the best available science, and a comprehensive understanding of the water resource underpinned by ongoing water monitoring, assessment and modelling
 - maintains the vast majority of the water in the aquifer, with the ESY using only 0.6 per cent of the groundwater storage throughout the 10 year life of the plan, or 0.06 per cent per year. This does not include any recharge (rainfall) events that may also occur during this timeframe.
- Groundwater depths range from near surface to 50 metres below ground level:
 - shallow groundwater sustains large trees and groundwater dependent ecosystems (GDEs), especially during long periods of no rainfall
 - the plan recognises the extensive understanding of GDEs and protects 70 per cent of GDEs from development in the area
 - the location of water extraction (bores) are managed through water licences, which must meet specific criteria and conditions.
- Drinking water will always be protected, so towns and communities have enough safe water.
- The allocation to the Aboriginal water reserve is 25,677 ML per year, which is available for Aboriginal economic development in the plan area.

Why has the plan been declared again?

This plan returns the ESY to the volume that was consulted on in 2023 and term of the plan to 10 years, unless a trigger within the plan is met prior to this timeframe. The plan is based on the best available science, and a comprehensive understanding of the water resource underpinned by ongoing water monitoring, assessment and modelling. The plan is conservative, maintaining the vast majority of the water in the aquifer, enabling use of only 0.6 per cent of the groundwater storage throughout the 10 year life of the plan.

More detail on all changes are in the summary of changes, which captures the amendments between the three year plan, 2024-2027 and the new 10 year, 2024-2034 plan.

The consultation summary captures the changes made during the draft and finalisation phase of the plan in 2023 into 2024.

How does the plan protect the trees depending on the groundwater?

The department has undertaken extensive work to establish the extent and location of GDEs within the district using remote sensing techniques combined with field verification to produce a predictive map of GDEs in the central part of the Central Plains management zone.

In order to achieve the objectives of water sharing, water extraction will have an impact on some GDEs because they occur extensively across the plan area. The impact of extraction varies throughout the area and impacts on groundwater levels are not consistent. The greatest impact is at the site of water extraction (bore) with lessening impact the further the distance from the extraction. Monitoring has confirmed that once pumping stops ground water levels return to their original, even levels.

The department developed the [Guideline: Limits of acceptable change to groundwater dependent vegetation in the Western Davenport Water Control District](#), including revised limits of acceptable change, to find a balance between maintaining biodiversity and development, to provide economic opportunity for the region. The plan requires licence holders and licence applicants to demonstrate that the water proposed to be taken under a groundwater extraction licence will not affect GDEs in a manner that exceeds the limits of acceptable change as set out in the guideline.

The guideline protects 70 per cent of GDEs at regional and property scale and includes consideration of the:

- cumulative GDEs impacts, including those that are a result of proposed land clearing and other activity for the development
- protection of all GDEs that are known to support significant populations of threatened species.

How was the estimated sustainable yield determined?

The ESY is informed by scientific understanding of the water resource underpinned by water monitoring, assessments and modelling, which is outlined in the Background Report.

Modelling was used to test the ESY and confirm the impacts are within acceptable levels, in consideration of the plan's objectives and the diverse water uses within the district. The process included modelling the impact of taking different volumes of water over time, which were compared with scenarios where no water was taken. Modelling considers climate and water resource data with actual and proposed water take, including taking water from the Aboriginal water reserve.

The model uses facts about the geology, groundwater levels and hydrogeological processes and climate data, including in-field data obtained from investigation bores and bore reports, which have been calibrated using groundwater monitoring information collected by the department.

Most recently, considerable work was carried out to test the model parameters by running over 1,000 simulations. The model has simulated actual data sets collected from several bore sites in the Central Plains management zone with considerable accuracy. The paucity of bore data in the remaining zones and the far eastern and western parts of the Central Plains management zone is acknowledged.

Independent reviews are conducted as part of ongoing scientific advancement within the department. An independent [uncertainty analysis](#) of the model concluded that the model parameters are acceptable with the review confirming the model meets industry standards and is adequate for water planning purposes.

How are sacred sites and cultural heritage considered in the plan?

The plan recognises the importance of identifying cultural heritage values and including measures to safeguard these in a culturally appropriate way. Improved understanding of cultural values and monitoring of cultural sites will ensure safeguards, that are appropriate to the Traditional Owners and custodians of the district, are implemented.

Work has started on changing the way the information is presented and results of this are contained in some of the first productions created in language to assist Aboriginal people to understand how we manage water under existing legislation ([available here](#)).

How is drinking water for communities protected?

In the plan, allocations for public water supply are prioritised over water for other beneficial uses, protecting the quantity of water for drinking. Existing allocations to public water supply allow for projected growth over the next 30 years. The quality of water within the resource will continue to be monitored through the work identified in the implementation actions.

What role does the Controller have now?

On 1 May 2023, [Andrew Johnson PSM¹](#) was appointed the Controller of Water Resources by the Minister.

Under the Act, the Controller of Water Resources is responsible for decisions about water extraction licences and is required to consider the plan, and the rules within the plan, when making licence decisions.

How much water is left, can I apply for a licence?

Almost 30,000 ML per year of groundwater remains available for licensing in the Central Plains water management zone, including 24,225 ML per year allocated for Aboriginal economic development from the Aboriginal water reserve.

¹ <https://nt.gov.au/environment/water/management-security/water-controller/andrew-johnson-psm>