Explanatory Notes Georgina Wiso water allocation plan documents

These explanatory notes have been prepared to assist people to easily understand the main features of the Draft Georgina Wiso Water Allocation Plan 2022-2030 (draft plan) and answer likely questions. The draft plan has been released with two accompanying documents - a Background Report describing the water resource information used to inform the draft plan; and Implementation Actions that describes the water resource management in the.

Further information and an opportunity to comment on the draft plan and associated documents is available until 18 December 2022 through have your say.

BACKGROUND

The **draft plan** applies to the Daly Roper Beetaloo Water Control District (the **district**), which extends north of Katherine to south east of Tennant Creek.

The district includes a number of basins and aquifers. This draft plan is the third plan for the district, the other declared plans are the Katherine Tindall limestone aquifer water allocation plan and the Oolloo Dolostone aquifer water allocation plan.

The statutory requirements of water allocation plans are set out in the Northern Territory Water Act 1992 (the **Act**), which requires the Minister for Environment, Climate Change and Water Security (the **Minister**) to ensure:

- water is allocated within the estimated sustainable yield to beneficial uses, including an allocation to the environment and an Aboriginal Water Reserve
- the total water use for all beneficial uses is less than the sum of allocations to each beneficial use
- the right to take water under a licence is able to be traded.

Additionally, the Act requires the Controller of Water Resources (the **Controller**) to establish a continuous program for the assessment of water resources including investigating, collecting, collating and analysing water resource information and to grant surface water and groundwater extraction licences. The water resource program for the Georgina Wiso plan area is outlined in the Implementation Report. The Controller is also responsible for granting surface water and groundwater extraction licences. The Department of Environment, Parks and Water Security (**department**) is responsible for the implementation of the Act.

The plan was presented to the Beetaloo Regional Reference Group and developed using scientific studies and water monitoring and assessment underway through the Strategic Regional Environmental and Baseline Assessment (SREBA) for the Beetaloo Sub-basin.

Why has the draft plan been developed?

On 16 April 2018, the Northern Territory Government accepted all recommendations from the Final Report of the Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (The Inquiry). The Inquiry made specific recommendations to manage the potential impact and risks associated with hydraulic fracturing of onshore unconventional shale gas reservoirs on water resources. The Inquiry recommended that the Daly-Roper water control district be extended south to include all of the Beetaloo Sub-basin, and that water allocation plans be developed for the regions of the Beetaloo Sub-basin. This plan meets this recommendation.

Unlike other plans in the Territory, this plan has been developed early to provide a framework for allocations before development occurs. We have an understanding of the water resources in the region and have used a cautionary approach to ensure that development occurs in a sustainable way.

What are water allocation planning documents?

Water allocation is the process of determining how much water is available in the water resource to share between consumptive uses and non-consumptive uses. Water allocation in the Northern Territory is undertaken at a regional level within defined areas known as water control districts, which are declared by the Minister for Environment by *Gazette* notice.

To meet the requirements of the Act and to better reflect the different responsibilities of the Minister and the Controller, the water allocation plan has been separated into three documents:

- Background report
- Water allocation plan
- Implementation actions

The **background report** is a product of the work undertaken by the department to collate and analyse water resource information. The report provides details on the information and processes that informed the plan, including available data and research on the surface and groundwater water resources of the district. It also describes the key environmental values of the district and their dependency on water resources, and the social and developmental context of the region, including current water use and projections of future water demand. The report collates the data and knowledge regarding the district at the time it is made.

The **water allocation plan** is the statutory document required to be *gazetted*, which describes the estimated sustainable yield (the ESY) for the water resources of the water control district. The ESY is the volume of water that can be taken sustainably from the waterways and groundwater of the district. The plan allocates that water amongst declared beneficial uses and provides for trading of water. The plan takes effect from the date of its *Gazette* by the Minister, and will remain in force for a period of eight years, with a review undertaken no later than four years.

The **implementation actions** detail how the Controller is proposing, to discharge their requirements under the Water Act with respect to the water resources of the district. It defines a continuous program for the assessment of water resources in the Territory, including the investigation, collection and analysis of data concerning the occurrence, volume, flow, characteristics, quality and use of water resources. That program is described within the document as a series of implementation actions designed to meet high level outcomes, and includes a body of research, monitoring and analytical work.

What is the estimated sustainable yield?

The estimated sustainable yield (ESY) is the volume of water that can be taken sustainably from the waterways and groundwater in the plan area. The daft plan allocates the ESY amongst different users.

The water resource managed through the daft plan is the Cambrian Limestone Aquifer (CLA), which is an extensive regional aquifer across the Georgina Basin and Wiso Basin. This regional aquifer holds significant volumes of water, which is separated between the Georgina and Wiso water management zones.

The plan establishes and ESY of 262,560 ML per year for the entire plan area, which is less than the rate of replenishment of the resource. Setting water allocations at 40% of annual recharge rates means that during the eight years of the plan the aquifer storage will continue to increase.

How was the ESY determined?

The ESY has been informed by the scientific understanding of the regional aquifer. This is underpinned by bore drilling and water monitoring programs, groundwater assessments and modelling, which is outlined in the draft background report.

The ESY of 262,560 ML per year is less than the rate of replenishment of the resource. This means the water allocations are 40% of annual recharge rates and that during the eight years of the plan the aquifer storage will continue to increase.

The draft background report references a number of independent studies producing a range of estimated recharge rates. The ESY in this plan is based on the Department's modelled recharge rate which is the lower and represents a conservative approach.

Is this the largest allocation in the Territory?

Yes in volume, but no in proportion to the land area the water is available from. The draft plan covers a large land area of 155,000 km^2 area or 12 percent of the Northern Territory. The draft plan area is twice the total land area of all the existing water allocation plans in the Territory.

The amount allocated through the plan is 262,560 ML per year, which by land area is less than the all the existing water plans, except Ti Tree.

How does the plan assess environmental water requirements?

The first priority of the draft plan is to ensure the majority of water in the district is retained and preserved for non-consumptive uses, or for ecological and cultural purposes.

In the draft plan the ESY is based on recharge rates, this means that any water stored in the water resources remains in the water resource and available for ecological purposes.

Groundwater dependent ecosystems (GDEs) are ecosystems that require access to groundwater to meet all or some of their water requirements. The relatively deep groundwater levels across the plan area means that it is too deep to be accessed by GDEs and therefore the majority of water extraction in the plan area will not require management arrangements. Further work has been identified in the draft implementation actions.

Will using water in the plan affect the rivers or springs?

No the plan will not affect the Daly River, Roper River or Mataranka Springs. Our understanding of the regional aquifer managed through the plan has been informed by scientific studies. It is known that on

average 3,500 ML of water travels per year from Georgina Basin to Roper River catchment and 300 ML of water per year travels from the Wiso Basin to the Daly River catchment.

This level of conductivity between the plan area to Roper and Daly catchments is insignificant compared to the volumes of water in the plan area and the river catchments so will not affect flows in rivers or springs.

How are cultural values protected and managed?

The first priority of the draft plan is to ensure the majority of water in the district is retained and preserved for non-consumptive uses, to maintain ecological and cultural values.

In the draft plan the ESY is based around recharge, this means that any water stored in the water resources remains in the water resource and available to maintain cultural values.

The ongoing involvement of Aboriginal people in the plan area is important as they hold immense knowledge of the cultural values of the region and are custodians for water places and places relying on water. Over the coming years, the department will work with the land councils to establish an Aboriginal Reference Group to ensure that Aboriginal cultural values and knowledge are understood, key groundwater dependent sites are defined, and specific cultural protections are developed for future inclusion in the plan. This work has been identified in the draft implementation actions.

What are the key numbers?

- Total storage of the groundwater resources in the district is 747,605,000 ML
- Annual recharge is 656,400 ML per year
- Estimated sustainable yield is 262,560 ML per year
- Current water licence entitlements are < 1,500 ML per year
- Allocations to rural stock and domestic and public water supply are 22,000 ML per year
- Allocations to Aboriginal water reserve are 24,981 ML per year
- Allocations to petroleum activities are capped at 10,000 ML per year

How much water is currently being used?

Current water use in the region is very limited. Approximately 0.003 percent of total storage or 3 percent of average annual recharge, of which 93 percent of this current take represents rural stock and domestic use that is not licenced.

Current licensed use represents only 0.0001 percent of total storage and 0.2 percent of recharge.

Does the plan have an Aboriginal water reserve?

Yes, the Aboriginal water reserve in the draft plan is 24,981 ML per year with 22,760 ML in the Georgina Basin water management zone and 2,221 ML in the Wiso Basin water management zone.

The Strategic Aboriginal water reserve policy framework establishes the methodology for determining the amount of water allocated to the Aboriginal water reserve for Aboriginal economic development.

The Aboriginal water reserve is calculated as a percentage of the ESY based on the eligible Aboriginal land in the water control district with access to the water resources.

Does the plan impact on existing licence holders?

The draft plan and change in ESY does not impact existing licence holders or water users. Current water licence entitlements will remain the same.

What are licence holders required to do?

All licence holders are required to report on the volume of water they take, which they can easily do online.

The water licensing framework has conditions for significant water extraction licences, which is defined as >500 ML per year that requires additional requirements for:

- identification and protection of key Aboriginal cultural sites
- ongoing water quality and water level monitoring to demonstrate impact of property scale extraction i.e. local scale scenario modelling to determine GDE impact
- staging the extraction of water where approval by the Controller to progress from one stage to the next is dependent on the response of the water resource and meeting the limits of acceptable change.

What role does the Controller have now?

Under the Act, the Controller is responsible for decisions about water extraction licences, and is required to consider the plan when making licence decisions. This means licences may only be granted if the total volume of water that may be taken is within the allocations defined in the draft plan for the water management zone and the beneficial use.

What will the department do to manage the water resources?

The department will deliver the draft implementation actions to ensure that the water resources in the district are managed in accordance with the draft plan.

This means the department will:

- deliver the department's water monitoring program, which is reviewed annually
- produce an annual report for the water resources in the district
- support the delivery of online reporting of the water use of each licence
- continue to strengthen compliance and enforcement activities through the compliance and enforcement priorities 2021–2026 and annual reporting.

The department will establish a Georgina Wiso Water Advisory Committee, which will include an Aboriginal Reference Group to advise on the implementation of the final plan. This will ensure a range of opportunities for various stakeholders to contribute their views and perspectives.

How is the quantity and quality of drinking water for communities protected?

In the draft 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 draft implementation actions.

How long will the plan be in place?

The draft plan is proposed to be in place for the maximum period of eight years which is consistent with the Act that requires a maximum period of 10 years.

Will there be a review of the plan?

The Act requires that a plan is reviewed at least every five years. The draft plan proposes review after four years.

In considering advice from stakeholders, additional triggers to review the plan prior to the statutory period based on actual water use are included in the draft plan. These provisions are consistent with the precautionary approach to resource management and the principles of adaptive management.

What is the opportunity for development in the region?

The pastoral industry has a long history in the plan area and is a major land user, 65 pastoral leases overlap the plan area. There is strong interest in diversifying pastoral land use, and some mining and petroleum exploration is occurring in the general area. The plan area overlays the majority of the Beetaloo Sub-basin which has been identified for unconventional gas exploration and production.

Soil and land suitability assessments have identified approximately 56,000 ha of versatile lands in the Dunmarra and Barkly North area appropriate for a range of broad-acre irrigated agriculture.