

2020 Announced Allocation Decision

Daly Roper Beetaloo Water Control District - Ooloo Dolostone Aquifer Water Allocation Plan 2019-2029 area

Water extraction licences in the Ooloo Dolostone Aquifer Plan area, in the Daly Roper Beetaloo Water Control District, are granted subject to annual announced allocation conditions. These conditions allow me, as the Controller of Water Resources, to reduce licensed water entitlements annually, to protect the environmental, cultural and social values associated with water resources.

In determining whether to make an announced allocation, resulting in a reduction of licensed entitlements for the 2020 Water Accounting year, I considered the following matters.

1. *Climate information*

The Douglas-Daly region has experienced a similar wet season to last year, with minimal recharge to the Ooloo Dolostone aquifer (ODA). However, the Douglas-Daly region received better rainfall than the Katherine region for the same period. Rainfall recorded at the Douglas Daly Research Farm indicated the Douglas-Daly region received around 70 per cent of average rainfall to the end of April 2020, compared to 68 per cent for the same period last year. The ODA received below average recharge in the 2019-20 wet season.

2. *The Plan*

The Ooloo Dolostone Aquifer Water Allocation Plan 2019-2029 (the **Plan**) provides that the combined effect of all groundwater and surface water extractions should not reduce natural flows in the Daly River beyond the specified acceptable limits at three key monitoring sites: the Dorisvale, Ooloo Crossing and Mount Nancar gauging stations, moving downriver to the north. The Plan identifies the percentage of modelled natural river flow that should be maintained based on natural flows at the three sites.

3. *The geographic distribution of key inflows*

Flows in the Daly River are related to surface water inflows and groundwater discharges into the river, including from its tributaries. The Plan area covers the extent of the ODA. The Plan is divided into the Southern, Central and Northern groundwater management zones. The Dorisvale gauging station is located near the boundary of the Southern and Central groundwater management zones and the Ooloo gauging station near the boundary of the Central and Northern groundwater management zones. The Mount Nancar gauging station is located downstream of the boundary of the Plan area.

The ODA commences discharging into the Katherine River downstream of the Wilden gauging station. The Plan outlines the relative contribution of surface and groundwater in each section of the river (corresponding to the groundwater management zones) to the overall river flow. Accordingly, by the time river flows reach Mount Nancar, all extraction from the ODA and discharges from the ODA to the Daly River have occurred. At Mount Nancar, the Daly River has also received inputs from a range of other surface and groundwater systems. The Plan takes these inflows into account in establishing minimum natural flow targets.

There are 39 groundwater extraction licences and 3 surface water extraction licences in the Plan area with announced allocation conditions. The majority of extraction occurs in the Northern groundwater management zone.

4. Modelling of flows

Modelling of the ODA was conducted using the Daly River Catchment Integrated Hydrologic Model, which predicts the impact of water extraction on river flows across a number of water resources within the Katherine-Daly region.

Modelled natural flow predicted that flows at Dorisvale and Mount Nancar would be always greater than the Erskine environmental flow targets of 6.2 and 12 cumecs, respectively, for the duration of the dry season. Modelling for Oolloo Crossing, predicted 164 days where flows would be less than or equal to the Erskine environmental flow target of 12 cumecs. For these days, the Plan recommends that the combined effect of all groundwater and surface water extractions should not reduce daily flows in the Daly River at Oolloo Crossing by more than eight per cent.

Of the 164 days at Oolloo Crossing when the modelled natural flow was predicted to be less than or equal to 12 cumecs, the combined effect of all groundwater and surface water extractions was modelled to exceed the environmental flow target of eight per cent of the natural flow, by between 1.4 and 3.9 per cent of the natural flow.

5. Water use information

The Plan sets an estimated sustainable yield for the ODA. Current consumptive uses account for approximately 90 per cent of the estimated sustainable yield; therefore, the consumptive pool derived from the ODA as a whole, is not fully allocated. However, as outlined in the Plan, the Northern groundwater management zone remains over allocated.

It is a condition of water extraction licences that licence holders report their water meter readings at the end of each month. Reported extraction of water within the ODA across all licence securities was approximately 40 per cent of total volume of licensed entitlements within the ODA in the 2019 Water Accounting year.

Licences within the ODA were the subject to a process to return underutilised water in 2018 and 2019.

On the basis of reported water use, and information obtained through the underutilised water process, there is low likelihood that maximum extraction of licensed entitlements will occur in the 2020 water year due to lack of development and infrastructure to utilise full licensed entitlements.

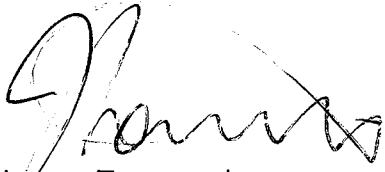
Conclusion

I have determined reduction of licensed entitlements within the Oolloo Dolostone Aquifer is not necessary to maintain the environmental, cultural and social values of the water.

I am satisfied that modelled results at Mount Nancar are the most reliable indication of river flows in the 2020 season because flows at this point take into account all extraction and discharges into the Daly River. Modelling of flows at Mount Nancar indicate non-consumptive water requirements will be satisfied even with extraction of maximum licence entitlements in the 2020 water year.

In addition, the under allocation of the resource in the Southern and Central management zones means even though 2019-20 rainfall in the wet season was below average, the level of extraction remains significantly less than the estimated sustainable yield. Further, the reported water use and development plans for licence holders in the area mean that there is a low likelihood that extraction of maximum entitlements will occur in the 2020 water year. This further reduces any potential risk to the non-consumptive values of the water.

Therefore, all licence holders within the Ooloo Dolostone Aquifer, in the Daly Roper Beetaloo Water Control District are permitted to extract **100%** of their licensed entitlements for the 2020 Water Accounting year commencing 1 May 2020.



Joanne Townsend
Controller of Water Resources

30/4/2020