Surface water take – wet season flow policy



Document title	Surface water take – wet season flow policy
Contact details	Department of Environment, Parks and Water Security Water Resources Division, <u>WaterResources.DEPWS@nt.gov.au</u>
Approved by	Northern Territory Government
Date approved	November 2023
Document review	Five years
TRM number	LRM2022/0132-0008~0019

Version	Date	Author	Changes made
1.0	8 November 2022	Water Resources Division	Draft for public comment
1.1	14 June 2023	Water Resources Division	Response to public consultation
1.2	16 October 2023	Water Resources Division	Finalisation with NTG consultation
1.3	24 January 2024	Water Resources Division	Administrative amendments for public release

Acknowledgement of Country

The Northern Territory Government respectfully and proudly acknowledges the Northern Territory's Aboriginal people and their rich cultures. We pay respect to Elders past and present. We acknowledge Aboriginal peoples as the traditional owners and custodians of the lands and waters that we rely on for our livelihoods. We recognise the intrinsic connection of traditional owners to Country and value their ongoing contribution to managing the lands and waters. We support the need for genuine and lasting partnerships with traditional owners to better understand cultural connections, and we will work to establish lasting partnerships to manage water together, now and into the future.

Term	Definition
25th percentile	is the value in a set of values, ranked from smallest to largest, where 25% of values are equal to or less than and 75% are larger
Act	means the Water Act 1992 (NT)
Catchment	the extent of land where water from precipitation drains into a waterway
Consumptive pool	the amount of water that can be made available for consumptive use in a given water system and where a water plan has rules, in accordance with those rules
Dry season	means the period from 1 May to 30 September
Hydraulic conditions	the volume, speed, frequency, connectivity and timing of flows in a waterway
Minimum flow conditions	the required minimum passing flow rate at a specified location
River basin	catchments discharging to the seas through a single waterway or across a single reach of coastline. Appendix A shows Top End river basins
Take	see Water Act 1992, section 4(1)
Tidal influence	the extent of water movement in a waterway due to changes in gravitational effects of the moon
Top End	a water resource as described in <u>Classification of Top End and Arid Zone for</u> <u>Northern Territory Water Resources, Technical Report 55/2020</u>
Transitional flow	the change in hydraulic conditions in a waterway between wet season flows and dry season flows and vice versa
Water allocation plan	see Water Act 1992, section 22B
Water licence	means a water extraction licence granted under section 45 of <i>the Water Act</i> 1992
Waterway	see Water Act 1992, section 4(1)
Wet season	the period from 1 October to 30 April
Wet season flows	increased surface water flow that occurs during the wet season in response to rainfall

Contents

1. Purpose	5
2. Scope	5
3. Commencement	5
4. Water availability	5
4.1. Water allocation plan	6
5. Water licence	6
5.1. Licence conditions	7
5.2. Trade	7
6. Interference with a waterway	7
6. Interference with a waterway 7. Related legislation, resources and refrerences	7 7
 Interference with a waterway Related legislation, resources and refrerences 7.1. Legislation 	7 7 7
 Interference with a waterway Related legislation, resources and refrerences 7.1. Legislation 7.2. Resources 	7 7 7 7
 Interference with a waterway	7 7 7 7
 6. Interference with a waterway	7 7 7 8

1. Purpose

This policy establishes the rules for determining water availability for taking surface water in the wet season and provides guidance on water licensing.

The policy sets the rules for quantifying wet season water flow volumes available for consumptive use from a river basin, while maintaining important hydraulic conditions and environmental and cultural values.

2. Scope

This policy applies to wet season take from Top End river basins (Appendix A) with reference to section 45 of the *Water Act 1992* (Act).

This policy supplants the allocation rules for taking water from rivers in the Top End during the wet season in the <u>Northern Territory Water Allocation Planning Framework</u>.

3. Commencement

This policy commences on 15 February 2024.

4. Water availability

The volume of water available from wet season water flows to consumptive uses will be five per cent of the 25th percentile of total flows for the three highest flow months of the year based on the previous 50 years flow or modelled rainfall data of the river basin (five per cent of 25th percentile).

A water allocation plan may establish a greater volume of water that can be taken from wet season flows and establish alternate principles on take.

In establishing water availability from wet season water flows, the following principles also apply:

- The total wet season consumptive pool will be determined for the river basin, based on the flows at a location upstream of tidal influence.
- The total wet season consumptive pool will exclude transitional flows from dry to wet season (generally November to December) and wet to dry season (generally April to May).
- The total flows will be determined using the historical data (typically 50 years) from relevant department gauging stations. If there is insufficient data, the total flows will be calculated using the department's surface water models.
- The proportion of the total wet season consumptive pool available to take under a licence will be calculated based as a proportion of the total catchment flow. Generally, this means, the further downstream the point of take, the greater the portion of the wet season consumptive pool for the river basin that would be available.



Figure 1. Comparison of 5% take to annual and wet season flows

4.1. Water allocation plan

A water allocation plan may establish the volume of water that can be taken from wet season flows. This could be greater than five per cent of the 25th percentile, where agreed hydraulic conditions are maintained and protections to environmental and cultural values are met.

Water allocation plans are developed in consultation with the community, Aboriginal people, industry and environmental organisations. The water resources within a plan area are subject to a continuous program of monitoring and assessment.

Where a water allocation plan is declared and it does not incorporate wet season flows as part of the resource management, water availability from wet season flows in that plan area is determined as five per cent of the 25th percentile.

5. Water licence

Applications for water licences are processed in accordance with the Act and Northern Territory Government policy, including this policy.

5.1. Licence conditions

Taking water will be subject to minimum flow conditions in the relevant river basin.

Water take will stop when specified minimum flow thresholds cannot be met in the river basin or at the point of take.

Minimum (low) flow conditions will:

- be specific for the location of the water take
- be greater than transitional flows
- use river height as a surrogate measure for flow.

While the calculation of the consumptive pool is based on three wettest months of the wet season, water extraction will not be restricted to this period.

Licence holders will be required to monitor, record and report on conditions of take including the volume of water taken, the time take commenced and time take ceased.

5.2. Trade

The <u>Trading licensed water entitlements policy</u> applies.

6. Interference with a waterway

Depending on the proposed method of extraction, the infrastructure required to take surface water in the wet season may be considered an interference with a waterway. An interference with a waterway is defined under section 4(1) of the Act.

Permitting under section 41 of the Act is generally required for activities that interfere with a waterway. However, the scope of a licence may be expanded to address those activities.

The Interference with a waterway guideline outlines considerations in determining an interference with a waterway and the type of information and level of assessment required to support this type of activity either under a permit to interfere with a waterway or in association with a licence.

7. Related legislation, resources and refrerences

7.1. Legislation

Water Act 1992 - https://legislation.nt.gov.au/Legislation/WATER-ACT-1992

7.2. Resources

Water licensing and permits - https://nt.gov.au/environment/water/licensing

The following documents can be found on the water policies and guidelines page - <u>https://nt.gov.au/environment/water/management-security/water-policies-and-guidelines</u>

- Interference with a waterway guideline
- Northern Territory water allocation planning framework
- Trading licensed water entitlements policy

7.3. References

Short, M.A. and Bond, T.W. (2021). Classification of Top End and Arid Zone for Northern Territory Water Resources, Technical Report 55/2020 - <u>https://territorystories.nt.gov.au/10070/843257/0/0</u>

8. More information

Further information about water licencing is available from the department's website at: <u>https://nt.gov.au/environment/water</u>

Contact Water Resource Division to discuss licence and permit requirements.

Phone: 08 8999 4455

Email: WaterResources.DEPWS@nt.gov.au

Appendix A: Top End and Arid Zone geographical locations and Top End river basin systems



River basins are as defined by the former Australian Water Resources Council, which in the Top End Zone includes:

Adelaide River Basin Bathurst Melville Islands River Basins Blyth River Basin Buckingham River Basin Calvert River Basin Daly River Basin Darwin-Blackmore Rivers Basin East Alligator River Basin Finniss-Elizabeth-Howard Rivers Basin Fitzmaurice River Basin Goomadeer River Basin Goyder River Basin Groote Eylandt River Basin Keep River Basin Koolatong River Basin Limmen Bight River Basin Liverpool River Basin Mary River Basin McArthur River Basin Moyle River Basin Nicholson River Basin Ord River Basin Robinson River Basin Roper River Basin Rosie River Basin Settlement Creek River Basin South Alligator River Basin Towns River Basin Victoria River Basin Walker River Basin Wildman River Basin

Top End Zone includes all Northern Territory catchment areas where there are distinct wet and dry seasons; over 95% of rainfall occurs between October and April; annual rainfall is greater than 600 mm in most years; runoff (total annual surface water discharge from a catchment divided by the area of the catchment) is greater than 0.5 ML per hectare in most years; daily peak stream flows are more than 10 times average wet season daily stream flows; and groundwater recharge occurs in most years.