Surface Water Take - Wet Season Flows Policy

Draft for consultation

NORTHERN TERRITORY GOVERNMENT

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Disclaimer

The information in this policy does not constitute legal or other professional advice, and the information should not be relied on as a statement of the law. Licence holders or applicants should obtain professional advice relevant to their circumstances.

Contents

1. Terms used

Terms which do not apply generally but are defined for use in this Policy are shown **bold** in the text.

Term	Definition
25th percentile	is the value in a set of values, ranked from smallest to largest, where 25% of values are smaller and 75% are larger.
Act	Water Act 1992 (NT)
Arid Zone	water resource as described in Classification of Top End and Arid Zone for Northern Territory Water Resources, Technical Report 55/2020. In the absence of scientific information to characterise the water resource the geographical location as shown in Appendix A.
catchment	an area from which rainfall flows into a waterway or recharges an aquifer
consumptive pool	the amount of water that is available from a water resource to support consumptive uses, including stock and domestic and licensed use, after the water needs of important environmental and cultural functions are met as determined by the Controller of Water Resources in accordance with the Framework, this policy or as specified in the relevant water allocation plan.
Controller or Controller of Water Resources	means the Controller of Water Resources, a person appointed under section 18 of the *Water Act 1992*, with powers to carry out functions in administering the Act, the principal licensing and regulatory decision-maker in terms of the Act.
department or DEPWS	NT Department of Environment, Parks and Water Security or otherwise the Agency responsible for administering the Act, as defined by the Administrative Arrangements Order from time to time.

Term	Definition
dry season	the period from 1 May to 30 September when normally less than 5% of annual rainfall occurs.
Framework	Northern Territory Water Allocation Planning Framework
hydraulic conditions	the volume, speed, frequency, connectivity and timing of flows in a waterway.
licence	a water extraction licence granted by the Controller under section 45 of the Act to take water from a waterway.
minimum flow conditions	the required minimum passing flow rate at a location calculated by applying this policy.
NT	Northern Territory
Regulations	Water Regulations 1992 (NT)
river basin	an area associated with one or more catchments from which rainfall flows into a waterway and discharges to the sea through the same river. Appendix A shows Top End river basins.
take	in relation to water, includes to withdraw, pump, extract, or divert water away from a water resource and, where it is artesian water occurring in a bore, to allow the artesian water to flow from a bore.
tidal influence	the extent of water movement caused by the advance and retreat of marine water due to changes in gravitational effects of the moon as the earth rotates each day.
Top End	a water resource as described in Classification of Top End and Arid Zone for Northern Territory Water Resources, Technical Report 55/2020. In the absence of scientific information to characterise the water resource the geographical location as shown in Appendix A.
transitional flow	the change in hydraulic conditions in a waterway between wet season flows and dry season flows and vice versa.
wet season	The period from 1 October to 30 April when normally more than 95% of annual rainfall occurs.

2. Purpose

To establish the allocation rules for quantifying wet season water flow volumes available for consumptive use from a river basin, while maintaining free flowing rivers and important environmental and cultural values.

This policy establishes a hierarchy of allocation rules for taking surface water in the wet season and provides guidance on water extraction licensing.

In conjunction with this policy, the Processing Water Extraction Licence Applications Policy will apply, excluding matters relating to quantifying the consumptive pool and water availability, which are addressed under this policy.

This policy is an adjunct to the Northern Territory Water Allocation Planning Framework (Framework), which establishes contingent allocation rules for take from groundwater and surface water. The Framework does not apply to surface water take during the wet season.

3. Scope

This policy applies to wet season take from Top End river basins under section 45 of the *Water Act 1992*.

This policy does not apply to:

- collection of rainfall or surface water runoff that isn't connected to waterway
- dry season take of surface water from Top End water resources
- take of surface water from Arid Zone water resources
- take of surface water that is a previously authorised water entitlement as defined in the Water Extraction Licensing - Mining and Petroleum Activity Policy. However, previously authorised water entitlements will be considered in determining water availability under this policy.
- take of groundwater.

4. Commencement

This policy commences (proposed 1 July 2022).

This policy will be reviewed within five years of commencement.

5. Allocation rules

The volume of water allocated from wet season water flows to consumptive uses will be based on scientific information in accordance with the following heirachy:

1. **Scientific research**: relevant, available scientific research establishes the maximum volume of water that may be extracted from the relevant river basin, while maintaining important hydraulic conditions, environmental and cultural water requirements.
2. **Contingent allocation rule**: is applied when scientific research is not available. Typically the previous 50 years flow data will be used to determine the consumptive pool. The consumptive pool is calculated as 5 per cent of the 25th percentile of total flows for the three highest flow months of the year (generally January, February and March).

This hierarchy will be adopted to inform licence decisions and be used as a basis for establishing wet season flow volumes for consumptive use under a water allocation plan.

Allocating water does not guarantee water will be available to take. Accordingly, the volume of water allocated from wet season water flows to consumptive uses should be accompanied by a reliability measure where possible.

5.1. Scientific research

Determining allocations based on scientific research means that important environmental and cultural values will be identified and the hydraulic conditions required to maintain these documented.

These values are likely to be specific to a river basin and therefore scientific research should also be specific to that basin.

Scientific research should report a reliability measure for the calculated total wet season consumptive pool.

Where scientific research is not available the contingent allocation rule will apply.

5.2. Contingent allocation rule

The total wet season consumptive pool for a Top End river basin will be calculated as five per cent of the 25th percentile of total flows for the three highest flow months of the year (generally January, February and March).

The contingent allocation is highly precautionary, initially allocating a negligible portion of annual flows as the wet season consumptive pool as shown in Figure 1

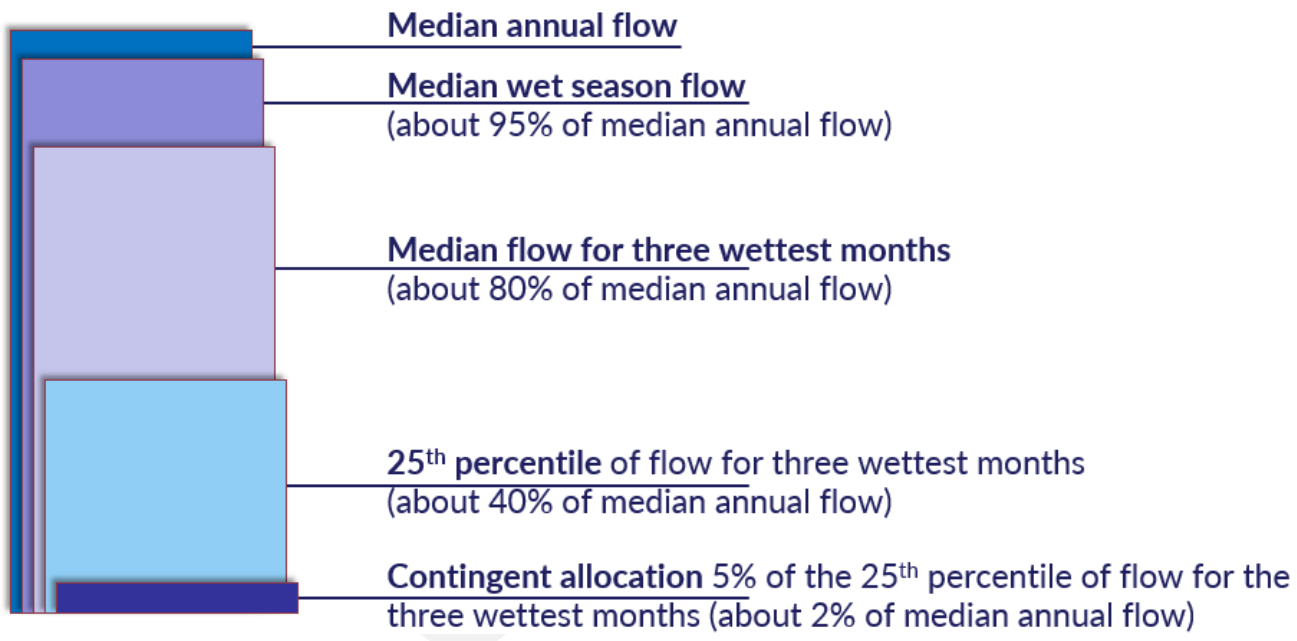

Figure 1 Comparison of contingent allocations to annual and wet season flows

When using the contingent allocation rule, the following principles 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, including transition from dry to wet season (generally November – December) and wet to dry season (generally April – May).

- The total flows will be determined using the historical data (typically 50 years) available data from relevant department gauging stations. If there is no available data, the total flows will be calculated using the department's surface water models.
- The calculated total wet season consumptive pool will be reported with a reliability measure.
- 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 that would be available.

6. Wet season water extraction licence

Excluding matters relating to quantifying the consumptive pool and water availability, which are addressed under this policy, wet season water extraction licence applications are processed in accordance with the Processing Water Extraction Licence Applications Policy.

Applications are processed in chronological order from the recorded date of acceptance i.e. first in first served basis.

When making a wet season water extraction licence decision under the Act, the Controller of Water Resources must consider the relevant factors under s 90(1) of the Act. The Processing Water Extraction Licence Applications policy and this policy are relevant considerations under s 90(1)(k).

A licence establishes a total maximum volume of water that can be taken by the licence holder in a specified period. The licence holder bears the risk of any changes in water availability resulting from seasonal conditions, climate change and other natural events like drought or changes to water allocation policy or plans.

6.1. Licence conditions

While taking water will not be restricted to the three wettest months of the wet season it will be subject to minimum flow conditions in the relevant river basin.

Water take will have a maximum rate that considers instantaneous flows.

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

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.

Licence holders will be required to monitor, record and report on conditions of take.

6.2. Trade

The Trading Licensed Water Entitlements Policy applies.

7. 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 of the Act to mean:

(a) cause a material change to the shape of a waterway

(b) cause a material change to the volume, sped or direction of the flow or likely flow of water in or into a waterway

(c) cause an alteration to the stability of the bed or banks of a waterway, including by the removal of vegetation.

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* (draft released for public comment) 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.

Contact Water Resource Division to discuss permit requirements associated wet season surface water take.

8. Related documents

Short, M.A. and Bond, T.W. (2021). Classification of Top End and Arid Zone for Northern Territory Water Resources, Technical Report 55/2020. Water Resources Division, Northern Territory Department of Environment, Parks and Water Security, Northern Territory Government. Palmerston, Northern Territory.

Related documents available from the department's website at:

https://denr.nt.gov.au/water/water-management/water-allocation-plans
https://denr.nt.gov.au/water/policy/water-allocation-policies
https://denr.nt.gov.au/water/policy/water-licensing-policies

Appendix A: Top End, Arid Zone Geographical Locations and River Basin Systems