

Minimum Inflows Method Review – Terms of Reference

Background

The Minister for Water, the Hon Rose Jackson MLC, requested the Office of the Chief Scientist & Engineer (OCSE) to convene an independent expert panel to review a draft method to review the minimum inflows used in making available water determinations (AWDs) in regulated water sources.

Water in government-owned storages in regulated river systems is distributed via an AWD process governed by the *Water Management Act 2000*, *Water Management (General) Regulation 2018* and provisions specified in relevant water sharing plans (WSPs). The process conducted for AWDs is implemented by the Water Group in the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) with support from WaterNSW and documented in protocol documents published by DCCEEW. The AWD process uses an accounting method to reserve an amount of water to secure supply to high priority water users, and to share the volume above this reserve to other water users.

In quantifying the amount of water expected to be available, WSPs require the water supply system to be operated in such a way that water would be able to be supplied during a repeat of the period of lowest accumulated inflows to the water source, to meet priority requirements for basic landholder rights, domestic and stock, local water utility and high security access licences. Current WSPs specify the period of lowest accumulated inflows to the water source as identified by flow information held by DCCEEW on a particular date. For example, the WSP for the *NSW Border Rivers Regulated River Water Source 2021* states "*flow information held by the Department prior to 1 July 2009*". This period of 'lowest accumulated inflows' is also known as the 'minimum inflow' sequence.

Nine inland regulated river WSPs include a provision requiring review of their periods of minimum inflows. Refer to Attachment A for a list of plans which include this review provision.

These review provisions are a follow-up to a commitment in the NSW State Water Strategy (Action 4.2) to "*Review water allocation and water sharing in response to new climate information*". DCCEEW has since made a commitment as an outcome of settling a legal action to have the Office of the Chief Scientist & Engineer (OCSE) undertake an independent expert review of the method.

DCCEEW has developed stochastic climate datasets which incorporate paleoclimate evidence and allow consideration of projected climate change impacts. The approach to developing these datasets was reviewed by an independent panel chaired by the OCSE in 2020 ([Independent review of the climate risk method for the NSW Regional Water Strategies Program Independent Expert Panel 2 April 2020](#)). This review found that the climate datasets were fit for purpose and a significant advance on relying on historical data alone.

DCCEEW is developing a method which uses these datasets to review the 'period of lowest accumulated inflows', with the assessments informing necessary changes to the accounting process for conducting AWDs. This method will be developed and initially trialed in two regulated river water sources – the NSW Border Rivers and Murrumbidgee. A sample of WSP requirements for this review is included in its entirety in Appendix A for reference.

DCCEEW is seeking advice on the suitability of the method for its purpose of operationalising climate risk into AWD decision making.

Scope

The OCSE will convene a technical panel with relevant experts to address the following:

1. Review the suitability of the minimum inflows methodology for its purpose of operationalising climate risk into AWD decision making.
2. On the basis of climate data quality assurance outcomes, review the suitability of the stochastic datasets used in the methodology that feeds into the broader AWD process.
3. Review the suitability of DCCEEW's approach to incorporate climate change into the methods described in TOR 1 & 2.
4. Provide recommendations for improvements to DCCEEW's methods that can be applied in the short and medium term.
5. Provide recommendations on any other matters the panel considers relevant.

Note: The Method is the process of using stochastic datasets, adjusted for climate change, to determine high security reserve storage for different risk levels. The selection of risk level of security for high priority water users, including consequent impacts on other water users and planned environmental water in regulated systems across NSW is outside of scope and is therefore not subject to comment by the Panel.

Out of Scope

- Review of DCCEEW's river system models of the regulated river water sources used for these assessments.
- Review of other aspects of the AWD method, including the calculation of losses and reviewing entitlement volumes.
- Recommendations on an appropriate level of risk to water user.

Proposed requirements

A panel of recognised experts in the subject of the review will be convened to review the method used by DCCEEW to incorporate climate risk into the analysis underpinning minimum inflow assumptions in available water determinations. The panel will be chaired by the Deputy Chief Scientist & Engineer, and panel members should collectively hold significant experience in climate variability and change, water management, and risk assessment.

Final Advice

The OCSE will produce a report to the Minister and DCCEEW setting out their findings and recommendations on the Terms of Reference. It will be made publicly available on the OCSE website. Final report to Minister April 2025 (TBC).

Attachment A

NSW Water sharing plans with provision for review of 'Maintenance of water supply' clause.

Water sharing plan	Minimum flows review required date
Water Sharing Plan for the NSW Border Rivers Regulated River Water Source 2021	2 July 2026
Water Sharing Plan for the Murrumbidgee Regulated River Water Source 2016	30 June 2026
Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources 2016	30 June 2026
Water Sharing Plan for the Gwydir Regulated River Water Source 2016	30 June 2026
Water Sharing Plan for the Lachlan Regulated River Water Source 2016	30 June 2026
Water Sharing Plan for the Macquarie and Cudgegong Regulated Rivers Water Source 2016	30 June 2026
Water Sharing Plan for the Belubula Regulated River Water Source 2012	30 June 2026
Water Sharing Plan for the Upper and Lower Namoi Regulated River Water Sources 2016	30 June 2026

An amendment to the Water Sharing Plan for the Upper Namoi and Lower Namoi Regulated River Water Sources 2016 is in progress that will add the review provision, with the review required by 30 June 2026.