

Natural Resources Commission

Review of the Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources 2016

Report Summary

This slide pack provides a high-level overview of findings and recommendations – the Commission’s full advice that was provided to the Minister for Water is available via our [website](#)

Acknowledgement of Country

The Commission acknowledges and pays its respects to the Bangerang, Barkandji and Maljangapa, Barapa Barapa, Maraura, Muthi Muthi, Ngiyampaa, Tati Tati, Wadi Wadi, Weki Weki, Wemba Wemba, Wiradjuri and Yorta Yorta peoples, for whom these waterways are significant. The Commission recognises and acknowledges that Aboriginal people have a deep cultural, social, environmental, spiritual and economic connection to their lands and waters. We value and respect their knowledge in natural resource management, and the contributions of many generations, including Elders, to this understanding and connection.

Our review

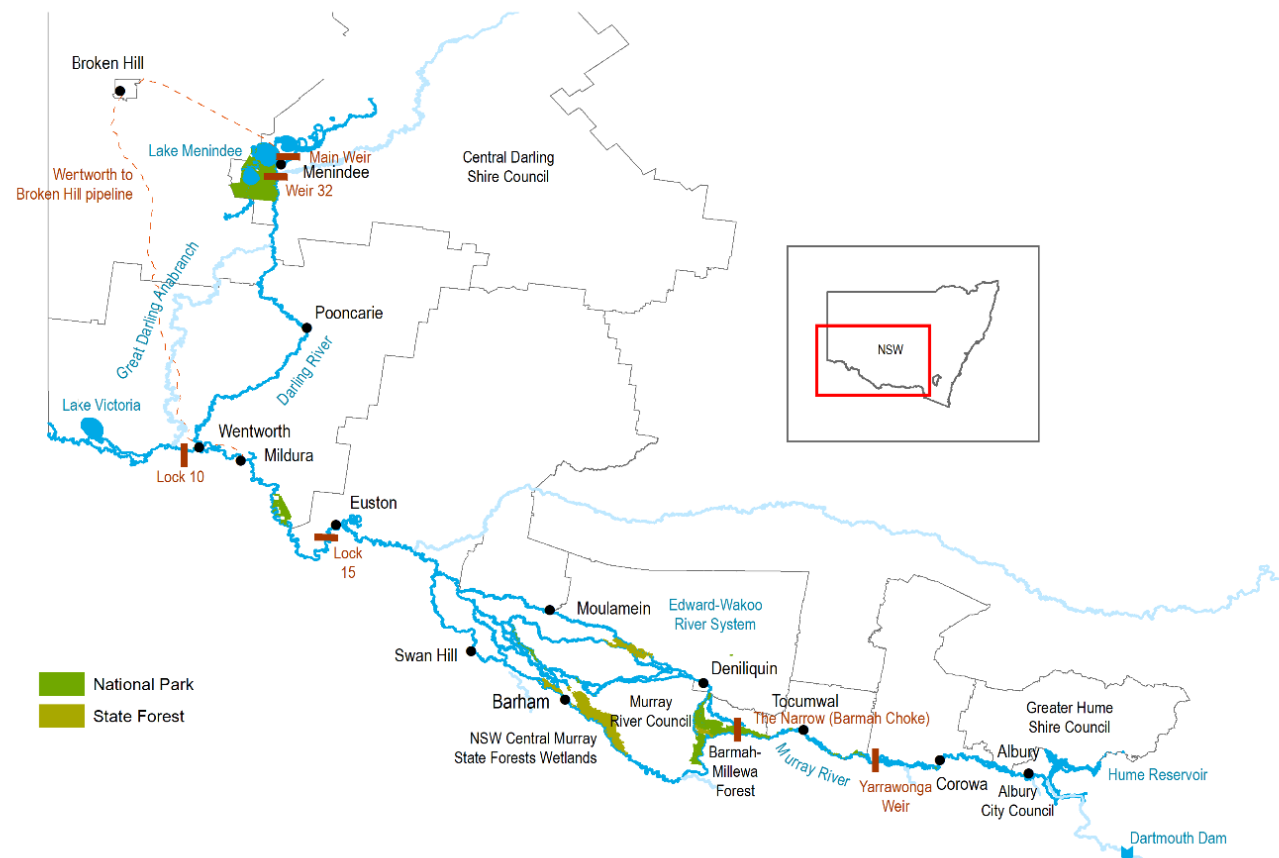
- The Commission has a statutory role under s43A of the *Water Management Act 2000* (the Act) to review water sharing plans approaching expiry
- Our reviews consider if a Plan's environmental, social, cultural and economic outcomes have been achieved, and what improvements can be made
- As part of our reviews, we recommend whether a plan should be extended or replaced
- Our reviews consider relevant data and documents, technical advice, stakeholder consultation and public submissions

Response to Office of Chief Scientist and Engineer recommendation

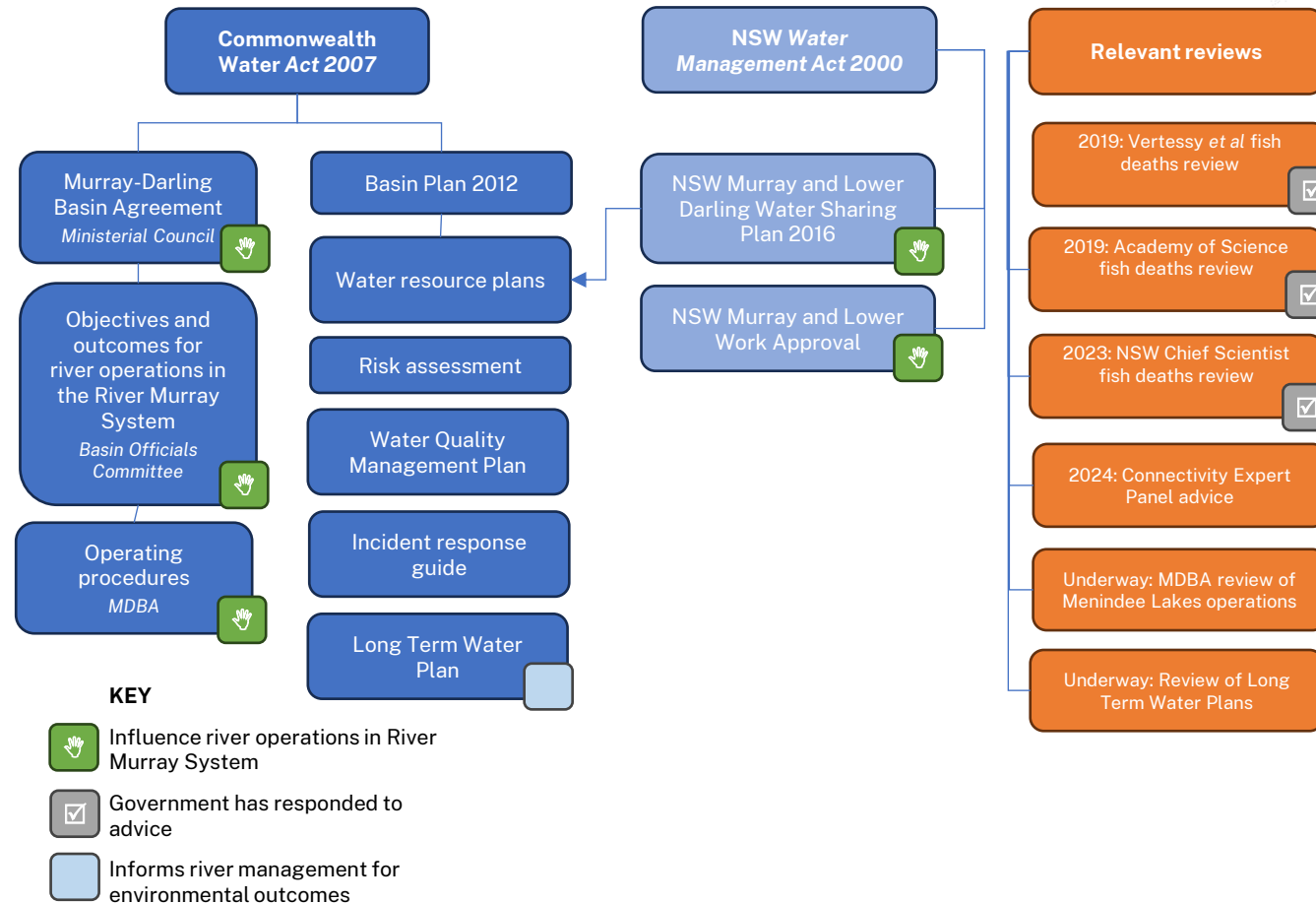
- In response to the NSW Chief Scientist and Engineer's review of the 2023 fish deaths in the Lower Darling-Baaka, the Minister for Water requested the Commission to specifically consider environment water and water quality needs of the Lower Darling-Baaka.
- The analysis of these issues was informed by experts in the fields of water quality, fish ecology and blue-green algae.
- Initial advice from the review was shared with the Connectivity Expert Panel and published on the Commission's website prior to the final water sharing plan review report.

Review area

- The Lower Darling-Baaka and Murray rivers support iconic landscapes – including Ramsar-listed Central Murray Forests.
- Menindee Lakes and Lower-Darling Baaka are critical fish corridors in the Murray-Darling Basin.
- The Plan area supports major regional centres (e.g. Broken Hill and Albury) and vulnerable remote communities (e.g. Pooncarie and Menindee).
- The Plan area underpins a \$2 billion agricultural industry and growing tourism sector.
- Environmental values are under significant pressure from river regulations and development.
- Mass fish deaths, poor connectivity and algal blooms have impacted the environment and communities, triggering several independent reviews.
- Water management in the Plan area is complex, with river operations subject to various instruments guiding operations and intergovernmental agreements.



Complex institutional and operating environment



Overall findings

- Plan provisions are inadequate to support the Plan's objectives.
- The Plan – which expires 30 June 2026 – should be replaced with significant revisions to plan provisions. Some urgent changes should be made prior to Plan expiry.
- There are several instances in which the Plan does not reflect the priorities of the Act, particularly the protection of the water source and dependent ecosystems.
- Key changes are needed to ensure flows are available to address social and environmental risks around water quality and fish deaths, supported by clear governance arrangements
- Environmental provisions could be made more flexible and optimised to improve environmental and community benefits.

Overall findings (continued)

- The construction of the Wentworth to Broken Hill Pipeline in 2019 has strengthened water security for Broken Hill, however remote townships like Pooncarie and Menindee have experienced a range of water quality issues over the life of the Plan that need to be addressed.
- The Plan has not delivered meaningful outcomes and benefits to Aboriginal communities. Despite the development of the NSW Aboriginal Water Strategy, more work is required to meet the needs and aspiration of Aboriginal People
- Despite projections that long-term water availability in the Plan area will decrease due to climate change, the Plan's provisions and objectives for climate change adaptation is limited, impacting all water users and the environment.
- Interjurisdictional agreements require review to ensure clarity and equity and support environmental outcomes.
- Detailed findings and recommendations are outlined on the following slides.



Accounting for the impacts of climate change

Key issues

- Despite climate projections indicating decreased water availability, there are limited provisions for climate change adaptation.
- The Plan relies on historical datasets for decision making and does not adequately consider or communicate future climate risks.
- This drives a reliance on reactive management through Section 324 orders to restrict extraction. Clear rules rather than reliance on Section 324 orders provide better certainty for licence holders.

Key recommendations for the Water Group

- Model impacts under baseline and climate change scenarios and use these to revise Plan provisions to maintain environmental outcomes.
- Incorporate climate change projections into decision making and move away from sole use of historical data.
- Regularly validate and recalibrate hydrological models.
- Revise Clause 66(2) to reflect that operations should be able to deliver high priority needs based on projected climate and hydrological needs.



Ensuring sustainable extraction

Key issues

- The Plan's long-term average annual extraction limit (LTAAEL) is not based on an assessment of sustainability.
- While LTAAEL compliance has recently commenced, it is not transparent or based on actual extraction data.
- Extraction limit compliance actions can be applied to held environmental water, reducing environmental outcomes.

Key recommendations for the Water Group

- Adopt an LTAAEL that protects the water source and dependent ecosystems, supports social and cultural objectives, and considers climate change.
- Leverage available metering data to inform compliance.
- Improve transparency around modelling assumptions, design, inputs and calibration – including independent review.
- Specify that held environmental water will not be reduced by extraction limit compliance actions.



Developing a sustainable and robust allocation policy

Key issues

- The allocations process poses a risk to essential services and inverts the principles of the Act.
- Discretionary decision making around available water determinations (AWDs) does not align with the priorities of the Act, with limited oversight and transparency.
- Requirements for the river operator to manage the water system to supply water to meet priority needs during a repeat of the period of lowest accumulated inflows does not reference environmental needs.
- The allocations process does not specifically address the impact of climate change.
- Limited clarity around decision making on the timing and volumes of water reserved for future priority needs.

Key recommendations for the Water Group

- Reconcile the Plan's lowest accumulated inflows against actual inflows and address shortfalls.
- Require review of lowest accumulated inflows to protect critical environmental needs.
- Clarify decision making around the Plan's second-year reserve.
- Seek Basin Officials Committee agreement to address inequities in NSW and Victoria state-based allocation policies.



Strengthening environmental protections in the Lower Darling-Baaka

Key issues

- The Lower Darling-Baaka experienced several water quality and fish death events – indicating the Plan’s provisions are not adequately protecting water quality or ecosystems.
- Flows from and to other water sharing plan areas are not adequately protected, including environmental water from the northern Basin.
- Flows to the Great Darling Anabranh are not adequately supported by the Plan.

Key recommendations for the Water Group

- The Commission provided advice on the Lower Darling-Baaka to the Connectivity Expert Panel – including revising minimum daily flows, strengthening the Lower Darling Environmental Water Allowance and clarifying the implementation of the Lower Darling Restart Allowance.
- Improve governance around water quality, blue-green algae and fish death events.
- Improve management of flood recession flows and provide greater flexibility in rates of rise and recession to support water quality outcomes.
- Formalise protections of flows from the northern Basin.
- Establish provisions for flows to the Great Darling Anabranh.
- Codify replenishment flow requirements for Three Mile Creek.
- Include amendment provisions to adjust rules based on planned infrastructure projects.



Strengthening environmental protections in the Murray

Key issues

- Significant environmental values, including Ramsar wetlands, are not adequately reflected in the Plan.
- Planned environmental water provisions do not adequately prioritise protection of the water source.
- Limited use of the Barmah-Millewa environmental water allowance.
- Limited clarity around water quality and algal event management.

Key recommendations for the Water Group

- Develop transparent procedures for borrowing and payback of the Barmah-Millewa EWA to ensure environmental needs are prioritised and include provisions in the Plan that requires consultation with the NSW Environmental Water Manager on borrowing against the Barmah-Millewa EWA.
- Develop rules to meet water quality objectives.
- Clarify River Murray Increased Flows processes – including ensuring advice from the Southern Connected Basin Environmental Watering Committee - and protect flows.
- Align the Plan with commitments under the Ramsar convention, including clear objectives, strategies and provisions to protect the Ramsar site.



Restoring Aboriginal water rights, values and uses

Key issues

- The Plan has not delivered meaningful benefit to Aboriginal communities.
- Increases in the magnitude and frequency of fish kills, declining water quality and lack of connectivity are adversely impacting Aboriginal cultural values and uses.
- Key strategies such as the allocation of water for native title and Aboriginal access licences have not been implemented.

Key recommendations for the Water Group

- Prioritise the development and implementation of the *NSW Aboriginal Water Strategy*.
- Work with Barkandji Native title holders to determine water needs for native title rights.
- Co-design objectives, provisions and performance indicators with Aboriginal stakeholders.
- Work with Aboriginal stakeholders to improve Aboriginal access licence design, uptake and use.
- Reserve volumes for connectivity for cultural outcomes.



Securing town water supply to meet future needs

Key issues

- Town water supply needs were met for towns in the Murray, but some communities in the Lower Darling-Baaka faced risks to supply.
- The construction of the Wentworth to Broken Hill Pipeline in 2019 strengthened water security for Broken Hill.
- Remote townships faced water quality issues, which will likely increase in the future.
- Population and climate change projections indicate future pressures on town water supply in the Albury, Greater Hume and Murray River council areas.

Key recommendations for the Water Group

- Revise share components for local utility access licences and extraction limits to reflect projected population growth.
- Consult with local water utilities in Pooncarie and Menindee to inform provisions to maintain water quality.



Reducing the impact of flow constraints on environmental outcomes

Key issues

- Flow constraints are designed to protect landholders from low-level inundation but have also led to the decline of inundation-dependent ecosystems.
- As part of commitments under the Basin Plan, the NSW Government has developed the Reconnecting River Country Program to assess options for relaxing constraints to enable higher environmental flows and address adverse social and economic impacts, particularly to riparian landholders.

Key recommendations for the Water Group

- If constraints are relaxed, Plan provisions will need to be amended to ensure this materially contributes to achieving intended environmental outcomes.



Aligning channel capacity sharing with the Act

Key issues

- Amendments made in 2022 placed the environmental water allowance in the lowest priority category, to be shared with regulated river (general security) access licences.
- This potentially contradicts the Act, which prioritises water to protect the water source and its dependent ecosystems and basic landholder rights.

Key recommendations for the Water Group

- The EWA should be given equivalent channel capacity priority to basic land holder rights (above all other extractive users).