

Background and proposed changes to the draft Water Sharing Plan for the Murray Unregulated River Water Sources 2024

September 2023



Acknowledgement of Country

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land, and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work and seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

Published by NSW Department of Planning and Environment

dpie.nsw.gov.au

Background and proposed changes to the draft Water Sharing Plan for the Murray Unregulated River Water Sources 2024

First published: October 2023

Department reference number: INT22/139066

Copyright and disclaimer

© State of New South Wales through Department of Planning and Environment 2023. Information contained in this publication is based on knowledge and understanding at the time of writing, September 2023 and is subject to change. For more information, please visit dpie.nsw.gov.au/copyright

TMP-MC-R-WC-V1.2



Contents

1.	Introduction	5
2.	Purpose of water sharing plans	6
3.	Legislation, policy, and planning framework	7
3.1	<i>Water Management Act 2000</i>	7
3.2	Water sharing plans	7
3.3	NSW water policy.....	8
4.	Water sharing plan review and replacement process	9
4.1	Principles for water sharing plan replacement.....	10
4.2	Scope for water sharing plan replacement.....	10
4.3	Updated methods and new information	12
5.	Water Sharing Plan for the Murray Unregulated River Water Sources	14
5.1	Overview	14
5.2	Current plan	17
5.3	Developing the draft 2024 plan.....	17
6.	Refining the provisions in the 2024 water sharing plan	19
6.1	Changes proposed in the draft 2024 plan.....	19
7.	Public exhibition phase and making a submission on the draft plan	24
8.	Finalisation of the draft plan	25
9.	Monitoring, evaluation and reporting	25
10.	Areas for further work	26
10.1	Update long-term average annual extraction limits.....	26
10.2	Wetlands	26
10.3	In-river dams for Town Water Supply.....	26
10.4	Metering and record keeping.....	27
10.5	Climate Change	27
	Appendix A – References and supporting documents	28
	Appendix B – Responses to NRC recommendations	29

Glossary and abbreviations

Term	Definition
BLR	basic landholder right
LTAEL	The long-term average annual extraction limit is the volume of water in a water source(s) that is available to be extracted lawfully or otherwise taken under access licences and basic landholder rights requirements.
MER	monitoring, evaluation and reporting
No Net Gain Trade	An equivalent or greater volume of entitlement must be traded out before the same or lesser entitlement volume is able to be traded in
NRC	Natural Resources Commission
NSW	New South Wales
Share component	<p>An entitlement to a given number of shares of the available water in a specified water source.</p> <p>The share component on an access licence certificate is expressed as a unit share. The share component of a specific-purpose access licence (for example, local water utility, major water utility and domestic and stock) is expressed in megalitres/year.</p>
Stochastic climate data	Stochastic climate datasets are extended climate sequences that are synthesised using statistical methods applied to observed data of rainfall and evapotranspiration and can include paleoclimatic data. These extended sequences include a more complete sample of climate variability, part of which describes more severe drought sequences.
Third or higher order streams	‘Stream order’ is used to describe the hierarchy of streams from the top to the bottom of a catchment. To determine the stream order, apply the Strahler system to streams shown in the hydro line spatial data: Water Management (General) Regulation 2018 Hydro Line spatial data Water (nsw.gov.au)
WM Act	<i>Water Management Act 2000</i>
WSP	<p>A water sharing plan sets the rules for how water is shared for the next 10 years.</p> <p>This is a general term that is not specific to a particular plan.</p>

1.Introduction

Water sharing plans were developed for rivers and groundwater systems across New South Wales following the introduction of the *Water Management Act 2000* (WM Act). Approximately 99% of the water extracted in NSW is now covered by a water sharing plan and managed under the WM Act. These plans protect the health of our rivers and groundwater while giving water users perpetual access licences, sustainable resource management, equitable water sharing arrangements, and increased opportunities to trade water.

NSW water sharing plans are valid for 10 years from their start date. The NSW Department of Planning and Environment amends water sharing plans throughout their life to ensure they can be carried out and comply with changing legislation. Near the end of a plan's 10-year term, the Natural Resources Commission (NRC) formally reviews it to identify any changes that are necessary to deliver better outcomes for all water users, including the environment.

Water in the Murray Unregulated River Water Sources is currently managed through the *Water Sharing Plan for the Murray Unregulated River Water Sources 2011* (the Murray 2011 plan).

An extension to the original expiry date means that this plan is now due to expire on 30 June 2024 and be replaced by the ***Water Sharing Plan for the Murray Unregulated River Water Sources 2024***. This document gives background information about this new plan, which we will refer to from now on as the 'Murray 2024 plan'.

The department has prepared a draft replacement plan for public exhibition and consultation.

This document gives high-level background information on the planning process and explains the changes to water management that the draft plan introduces.

You can find the draft plan, maps and information about the public exhibition period and how to make a submission on the department's website.

The resources in 'Appendix A – References and supporting documents' give more details of the draft plan area, its water resources and resource management background.

2. Purpose of water sharing plans

Expansion of water extraction across NSW since the beginning of the 20th century has seen increasing competition between water users (towns, farmers, industries, and irrigators) for access to water. This has placed pressure on the health and biological diversity of our rivers and aquifers.

In December 2000, the Parliament of NSW passed the WM Act, which has the overall objective to

‘provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations’

Water sharing plans play a major role in achieving this objective by providing a legal basis for sharing water between the environment and consumptive water users.

Water sharing plans are the primary means of carrying out the WM Act. They protect the basic rights of landholders to extract water and seek to balance the sustainable use of water for both economic and environmental outcomes.

3. Legislation, policy, and planning framework

3.1 *Water Management Act 2000*

The WM Act is the guiding legislation for water management in NSW. The Act allows for the sustainable and integrated management of water sources. It considers ecologically sustainable development, the protection and enhancement of the environment, and social and economic benefits.

The WM Act sets a maximum initial lifespan of 10 years for water sharing plans, at which point they need to be reviewed and replaced or extended. When deciding whether to extend or replace a water sharing plan, the responsible minister must consider:

- the most recent audit of the water sharing plan conducted under section 44 of the WM Act
- a report from the Natural Resources Commission that reviews (within the previous 5 years) if the water sharing provisions (legal conditions) have significantly helped to achieve, or have failed to achieve, environmental, social and economic outcomes, and if those provisions should change.

Under the WM Act, a water sharing plan may be extended for up to 2 years past the expiry date to allow the department to prepare a replacement plan.

You can review the [NSW Water Management Act 2000](#) on the NSW Legislation website.

3.2 Water sharing plans

A water sharing plan sets out locally appropriate rules and management arrangements for specific water sources that align with the principles of the WM Act.

Key elements of water sharing plans include:

- providing water for the environment by protecting a proportion of the water available for fundamental ecosystem health
- protecting the water required to meet basic landholder rights
- setting annual limits on water extraction that ensure security for water users and the environment
- giving water users a clear picture of when and how water will be available for extraction
- giving licence holders flexibility in the way they can manage their water accounts
- specifying the rules for water trading/dealings
- setting the mandatory conditions that apply to licence holders.

You can review the [Murray 2011 Plan](#) on the NSW Legislation website.

3.3 NSW water policy

We are continuously evolving and improving water-related policy and decision-making processes that carry out the legislative framework. We do this to ensure that we deliver our objectives for water resource management effectively. We develop plans in line with the principles of the WM Act and the National Water Initiative.

You can find more information on the [National Water Initiative](#) on the Australian Government Department of Climate Change, Energy, the Environment and Water website.

The NSW State Water Strategy placed a sharp focus on improving the security, reliability, and resilience of Town Water Supply (TWS). It is important the inland towns have the ability to consider in-river dams as an option to improve TWS security. Water Sharing Plans contain specific rules relating to the construction and operation of in-river dams including those built for TWS.

Current policy prohibits the construction of new in-river dams in 3rd and higher order streams in water sources identified as having high instream value using the macro risk assessment, but this approach restricts opportunities to improve TWS security. DPE Water have committed to work with agencies to refine the policy to better manage where in-river dams can be applied for and develop guidelines for how those applications are to be assessed, including an exemption for dam applications for town water supply purposes only.

DPE Water is also currently developing a new policy to provide better protection for significant wetlands in unregulated water sources. The work has been considered in the replacement plan with many wetlands identified for protection. More information on the proposed changes can be found in the wetlands factsheet.

4. Water sharing plan review and replacement process

Under the WM Act, water sharing plans have a 10-year duration.

During the life of the plan, it will undergo an independent review at least twice, as follows:

- The **implementation of the plan** will be audited in the first 5 years of the plan under section 44 of the WM Act.
- The **performance of the plan** will be reviewed in the last 5 years of the plan under section 43A of the WM Act.

The NSW Natural Resources Commission is the independent body that audits and reviews water sharing plans. Section 44 audits aim to identify where improvements are necessary to apply the plan rules. The section 43A review is to determine if the plan is achieving the intended environmental, social and economic outcomes.

The commission reports the findings of the audits and reviews to the NSW minister responsible for water, who decides whether to extend a plan for another 10 years or to replace it. If the Natural Resources Commission recommends replacing it, the department considers the commission's recommendations when developing the replacement plan.

More information and links to the reviews of the Murray 2011 plan are in section 5 of this document.

The then Minister responsible for water adopted the Natural Resources Commission's recommendation to replace the Murray 2011 plan in June 2022. To allow time to review and replace the plan, the duration of the current plan was extended by 2 years.

4.1 Principles for water sharing plan replacement

If the commission recommends replacing a plan, the department considers the recommendations, completes a departmental review and updates the current draft content.

Any replacement plan must consider the original requirements for water sharing plan provisions under Section 20 of the WM Act, which are to:

- establish environmental water rules for the area or water source
- identify requirements for water within the area, or from the water source, to satisfy basic landholder rights
- identify requirements for water for extraction under access licences
- establish access licence dealing rules for the area or water source
- establish a regime for the extraction of water under access licences, in line with the rules referred to in the points above.

The department's review will:

- seek to improve the efficiency and effectiveness of water sharing arrangements by targeting areas where new information shows the rules:
 - could be improved
 - are no longer appropriate
 - have had unintended effects
 - are difficult to implement
- use a collaborative approach to ensure it considers the views of all stakeholders when reassessing water sharing arrangements
- aim to balance social, cultural, economic and environmental needs of the community and catchments, in line with the principles of the WM Act
- ensure that the environmental outcomes of the plan are maintained or enhanced
- ensure that changes that affect water users will be minimised, where possible.

4.2 Scope for water sharing plan replacement

4.2.1 Issues in scope

To determine which issues are in scope, we use the Natural Resources Commission's review and other sources, including stakeholder feedback, to prepare a list of known water sharing plan issues. We work with subject matter experts, as necessary, to assess the list and decide if the issues are within the scope of the replacement process.

The scope of the review will consider, but is not limited to, the factors described in Table 1.

Table 1. In-scope considerations and sources for information

In-scope considerations	Potential information sources
<p>New information showing current water sharing arrangements are no longer appropriate or could be improved</p>	<ul style="list-style-type: none"> • Section 44 audits • Section 43A reviews • Monitoring, evaluation and reporting • Plan suspensions • Plan amendment register • Stakeholder feedback • Issues register
<p>New information that informs update of plan provisions</p>	<ul style="list-style-type: none"> • Information about new infrastructure • Socio-economic data • Water user behaviour • Risk assessments • Threatened species information • Groundwater Dependant Ecosystems • Basic landholder rights • Water entitlements • Aboriginal water-dependent values and uses
<p>Changes in policy or other legislation</p>	<ul style="list-style-type: none"> • Critical infrastructure legislation • Departmental policies • <i>Water Management Act 2000</i> requirements
<p>Water sharing arrangements that have had unintended effects or have not achieved intended outcomes</p>	<ul style="list-style-type: none"> • Section 43A reviews • Plan suspension • Plan amendment register • Stakeholder feedback • Issues register
<p>Implementation issues</p>	<ul style="list-style-type: none"> • Section 44 audit • Section 43A reviews • Plan suspension • Plan amendment register • Stakeholder feedback • Issues register
<p>Studies or amendments specified in the water sharing plan</p>	<ul style="list-style-type: none"> • Implementation program • Individual study reports • Amendment register

In-scope considerations	Potential information sources
Amendments required to carry out the State Water Strategy, regional water strategies or metropolitan water strategies	Strategy documentation

4.2.2 Out of scope

The department has also developed criteria for what is out of scope of the water sharing plan review. Later in the planning process, these criteria can help refine the list of issues considered in scope as we examine issues and as their effects become clearer.

We use the criteria in Table 2 to assess if an issue is out of scope. We may add other criteria when relevant.

Table 2. Assessment criteria for identifying whether an issue is out of scope

Assessment criteria	Comment/Example
Does the issue relate to water charges, costs, infrastructure proposals, operational activities or a licensing matter?	Issues that a water sharing plan cannot address.
Is another program or process addressing the issue, or is it the responsibility of another department?	Examples: Improving alternative water supplies for specific towns, drainage management.
Does the issue require time and resources beyond the time frame to review the water sharing plan?	Example: A study on the effects of climate change in a particular valley.
Is the issue consistent with the current legislative and policy framework?	Allowing water users to build harvestable rights dams on third order streams is a policy issue.

4.3 Updated methods and new information

4.3.1 Objectives, strategies and performance indicators

Under section 35 of the WM Act, a water sharing plan must include a vision, objectives, strategies and performance indicators to describe its intent, direct its rules and measure its success.

The objectives and strategies of plans describe clearly:

- what the plan is aiming to achieve
- a roadmap to achieving the goals
- a framework for evaluating the plan's success or effectiveness.

To enable meaningful evaluations, the development of plan objectives should show clear links between what a plan can control through water management strategies and the desired economic, social, cultural or environmental outcomes for the plan area.

The plan's objectives, strategies and performance indicators are shaped by the monitoring, evaluation and reporting (MER) framework to ensure sound policy, planning and regulatory decision-making during future evaluation of the plans.

4.3.2 Risk-based approach

Risk-based management helps water managers prioritise and direct time and effort to monitor, mitigate, or respond to the factors that pose the highest overall risks. It ensures that management is targeted, efficient and effective. When used adaptively, it is an excellent tool for determining where future management and monitoring effort is needed.

We have been using a risk-based water planning process in most unregulated rivers since 2004 in the form of risk assessments. These give risk-based information as part of our adaptive management approach to water sharing plans.

5. Water Sharing Plan for the Murray Unregulated River Water Sources

5.1 Overview

The Murray River, known legally as the River Murray, begins in the mountains of the Southern Alps of NSW and Victoria, and flows in a westerly direction for over 2,500 km to its outlet on the South Australian coast near Goolwa. It forms the border between NSW and Victoria for 1,880 km. Upstream of Hume Reservoir, near Albury, the River Murray is part of the unregulated WSP whereas downstream it is part of the regulated River Murray System.

The Murray plan area has the River Murray as its southern border. It extends close to 500 km from east to west and is generally narrow from the River Murray to the top of the catchment north and east, typically around 50 km.

The eastern most part of the plan area is characterised by mountains, strongly undulating slopes and higher rainfall. Downstream, these graduate to the gentle hills of the South West Slopes and, further west and below Corowa, the drier floodplains of the Riverina Region.

The Murray unregulated WSP has 15 water sources, just over 300 water access licences and overall entitlement of 42.4 gigalitres (GL). There are two extraction management units (EMUs). The unregulated Upper Murray EMU is upstream of Hume Reservoir and comprises 11 water sources and 14.1 GL of entitlement. The unregulated Middle Murray EMU covers the area between Hume Dam and the Murray's confluence with the Murrumbidgee. This EMU comprises four water sources and there is 28.3 GL of entitlement.

Murray Below Mulwala Water Source consists of the floodplain below Lake Mulwala. It constitutes around two-thirds of the entire WSP area and two-thirds of all licensed entitlement. Around half of the entitlement in this water source is reserved for the environment and held in Poon Boon Lakes.

Urban centres include Albury, Berrigan, Corowa, Deniliquin, Finley, Holbrook, Tocomwal and Tumbarumba. In general, these centres rely on water from the regulated NSW Murray and groundwater is the second most important source of town water.

Grazing is the most common agricultural pursuit in the Upper Murray, occupying around 30 per cent of the catchment above Hume Dam. It typically occurs on lower slopes and valley floors. The mostly rugged nature of the landscape means that less than one percent is used for cropping or irrigation. Conservation and forestry account for the remaining 70 per cent of land use in the upper Murray catchment. Extensive areas of National Park in the east conserve the alpine environments where the headwaters of the Murray River begin. There are also large areas of State Forest in the Tumbarumba region.

Agriculture including grazing, dryland cropping, and irrigation, is the dominant land use downstream of Hume Dam, which accounts for three-quarters of the plan’s area. Crops produced include winter and summer cereals, vegetables, and pastures for hay. Extensive irrigation occurs in the mid-lower reaches of the Murray River but almost all of this water is sourced from the regulated River Murray System, not the water bodies of the Murray unregulated WSP. Above Hume Dam, Upper Murray River and Mannus water sources are classed as having a high economic dependence on irrigation.

Table 3 and Table 4 give details of the potential levels of extraction for basic landholder rights (BLR) and licensed extraction within the Murray area.

Table 3. Requirements for water in the Murray 2024 plan – Basic Landholder Rights

Extraction type	Potential extraction (ML/year)
Domestic and stock	2,332
Native title	The amount of water that may be taken in the exercise of native title rights in accordance with the <i>Native Title Act 1993</i> of the Commonwealth.

Table 4. Requirements for water in the Murray 2024 plan - licensed extraction

Extraction type	Potential extraction (ML/year)
Domestic and stock	627
Unregulated river	41,178
Unregulated river (high flow)	0
Local Water Utility	639

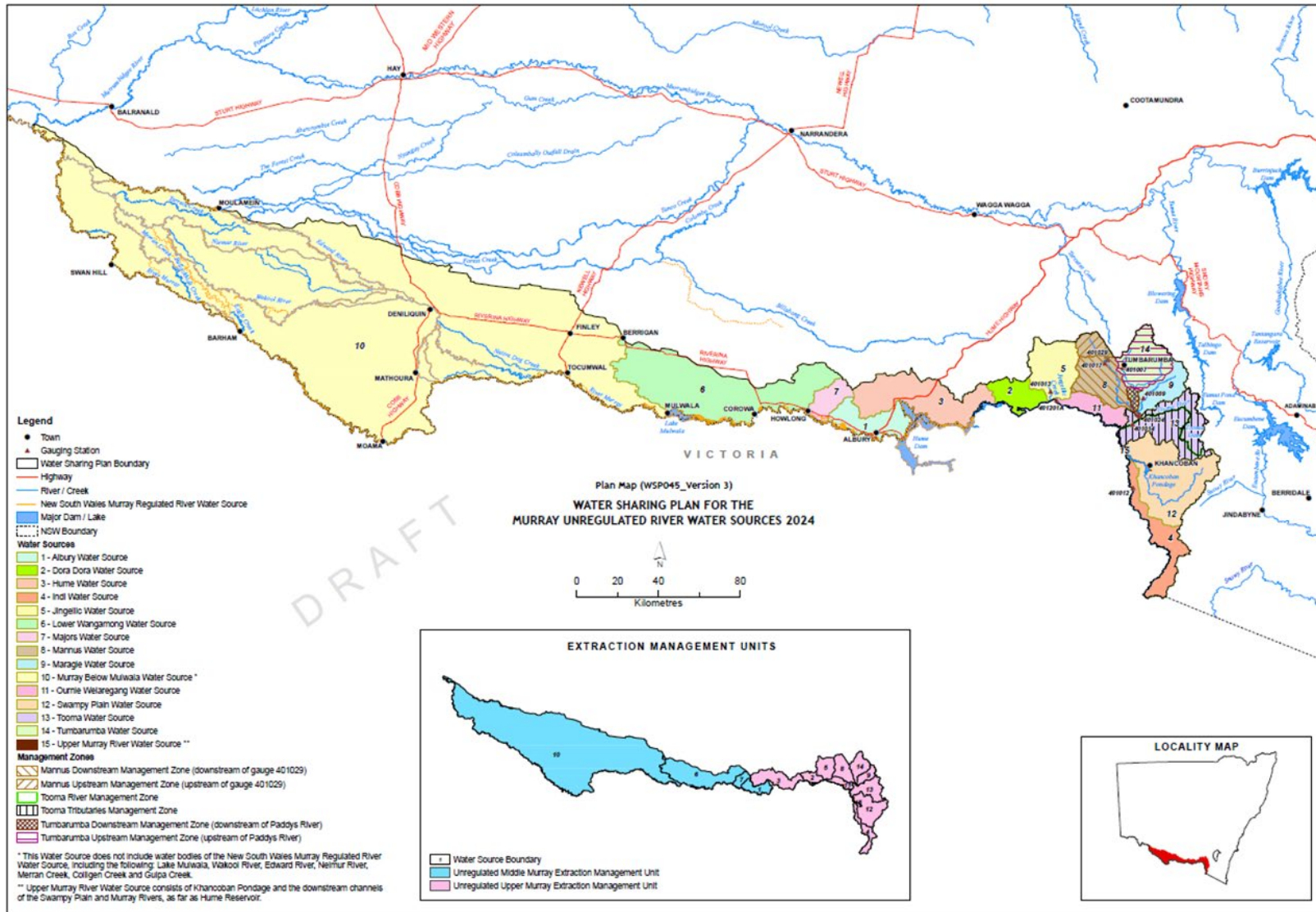


Figure 1. Plan area for the draft Water Sharing Plan for the Murray Unregulated River Water Sources 2024

5.2 Current plan

Water in the Murray area is currently managed through:

- the [*Water Sharing Plan for the Murray Unregulated River Water Sources 2011*](#)

For more information on the current plan, refer to:

- [Murray 2011 plan Background Document](#)
- [Murray Unregulated River Water Sources 2011 Rules Summary Sheets \(per water source\)](#)

The current Murray 2011 plan was developed using the macro-planning approach and included stakeholder and interagency consultation. Details of the macro-planning approach can be found in the following documents:

- [Macro water sharing plans - approach for unregulated rivers](#)
- [Macro water sharing plans – access and trading rules for pools](#)

5.3 Developing the draft 2024 plan

The processes that the Department of Planning and Environment has used in developing the draft replacement plan is an update on the previous macro-planning approach.

The development of replacement plans now follows the processes described in the [Replacement Water Sharing Plan Manual \(PDF 1.32 MB\)](#).

We continue to use some methods described in the macro-planning approach. This background document will describe the most recent and specific methods used to prepare the draft Murray Unregulated River Water Sources plan 2024.

The department is responsible for implementing the WM Act, including developing water sharing plans for NSW water resources. When drafting the replacement water sharing plan, we considered:

- the section 44 audit of the *Water Sharing Plan for the Murray Unregulated River Water Sources 2011*
- recommendations from the Natural Resources Commission's 2021 review of the *Water Sharing Plan for the Murray Unregulated River Water Sources*
- updated data, information and science
- the deliberations across government agencies including the Water group and Environment and Heritage group within the Department of Planning and Environment, Department of Primary Industries' Agriculture and Fisheries branches, WaterNSW and Natural Resources Access Regulator
- initial consultation with local water utilities to resolve licensing issues.

You can find the draft *Water Sharing Plan for the Murray Unregulated River Water Sources 2024* on the department's [website](#).

Details of the changes to the Murray 2011 plan are in section 6 of this document.

You can find information on the public exhibition phase and how to have your say on the proposed changes in section 7 of this document.

The [Natural Resources Commission Review of the Murray plan](#) is available from the commission's website under 'Completed Reviews' for 2021. You will find a summary of their recommendations and how the new water sharing plan has addressed them in 'Appendix B – Responses to NRC recommendations'.

5.3.1 Targeted consultation

We will engage with the community during public exhibition and before finalising the draft plan. Some discussions have already taken place, for example with local councils in respect to town water supplies. For further details on the public exhibition see Section 7 below.

6. Refining the provisions in the 2024 water sharing plan

6.1 Changes proposed in the draft 2024 plan

Key drivers for the changes in the 2024 plan include:

- the Natural Resources Commission’s review recommendations
- contemporary water resource policy – some changes to the plan align it with current policy to help improve efficiency and consistency in achieving water resource management objectives across the state
- updated data and knowledge improvements.

In general, and where possible, the changes to the plan reflect improved understanding and updated data. They aim to modernise and simplify the water sharing plan to make it easier to read while ensuring provisions are practical to implement and legally accurate.

We have proposed changes to:

- the general layout of the plan
- the vision, objectives, strategies, and performance indicators
- update the surface water long-term average annual extraction limits
- update basic land holder rights estimate and access licence share components
- update trade provisions
- adaptive management and amendment provisions.

A ‘report card’ is available for each water source. These detail the current rules and proposed changes that apply to that particular water source. The report cards give the public supporting information about the changes proposed in the draft plan. You can find these on the [department’s public exhibition website](#) by selecting ‘Murray area’ and then ‘supporting documents’.

6.1.1 Change the general layout

There are several structural changes in the draft plan. We have moved or reworded clauses, but their intent is the same. Such changes reflect current template styles and provide a more standard and consistent layout across the state’s water sharing plans, as well as making the water sharing plan easier to understand.

For example, we have removed unnecessary notes, as well as moved and consolidated amendment provisions to the amendment part of the plan.

6.1.2 Set vision, objectives, strategies and performance indicators

Part 2 of the draft plan describes the vision and objectives. The plan's vision encompasses the overall aim of the plan. The vision of the plan is to provide for the:

- health of the water sources and their dependent ecosystems
- continuing productive extraction of water for economic benefit
- spiritual, social, customary and economic benefits of water for Aboriginal communities
- social and cultural benefits of water for urban and rural communities.

The objectives of the draft plan are to:

- protect and, where possible, enhance and restore the condition of the water sources and their water-dependent ecosystems
- maintain and, where possible, improve access to water to optimise economic benefits for agriculture, water-dependent industries and local economies
- maintain and, where possible, improve the spiritual, social, customary and economic values and uses of water by Aboriginal people
- provide access to water to support water-dependent social and cultural values.

We will include objectives that are SMART (specific, measurable, achievable, realistic and timely) and detailed further in the MER plan for the replacement Murray 2024 plan. These will clearly link objectives, strategies and performance indicators. This addresses the Natural Resources Commission's recommendation to strengthen MER of the plan outcomes.

The vision, objectives, strategies and performance indicators that will form part of and guide the MER plan are in 'Appendix B – Vision, objectives, strategies and performance indicators'.

6.1.3 Update basic landholder rights estimates and licence share components

We are updating the estimate of extraction of water under BLR contained in Part 5 of the current plan. Draft estimates of the new figures are in Part 3 of the draft plan. We are currently finalising these estimates.

Since the development of the first water sharing plans, which began before 2003, numerous methods have been followed to estimate water requirements for domestic and stock BLR. These methods were superseded in 2010 by a standard NSW approach to support the development of surface and groundwater macro-sharing plans.

In 2020, we adopted the same method used in the development of macro-water sharing plans for estimating the water requirements of domestic and stock BLR. This method is in Appendix 5 of the [Replacement Water Sharing Plan Manual](#).

The 2024 estimates may differ from those in the current plan because of changes in land use, population density and the availability of more accurate spatial data.

The updated water access licence share components (water entitlements for each water source) are listed in Part 3 of the draft Murray 2024 plan. They reflect total share components in each water source.

6.1.4 Use adaptive management and include amendment provisions

Adaptive management means changing how we manage water in response to new information. During the life of a water sharing plan, this information may come from data collection and monitoring or from some other improvement in understanding. Such information could include socio-economic studies, hydrological modelling, ecological studies and information about Aboriginal cultural sites.

Both the WM Act and the National Water Initiative require us to use adaptive management. The WM Act allows for changes to a water sharing plan during its life if these are in the public interest. The draft plan also allows for amendments during its life. We will consult the public before making any future changes that could affect water users or the environment's access to water. Part 10 of the draft plan includes updated amendment provisions.

Examples of adaptive environmental water provisions in the replacement plan include the ability to amend:

- LTAAELs to base them on a proportion of flow if more information becomes available
- management so we can carry out native title determinations
- management so we can protect Aboriginal cultural sites that depend on water.

6.1.5 Access Rules

Mannus Water Source - Upstream Management Zone

The current access rule for Mannus Upstream Management Zone is a height based on the original Mannus Creek at Glenroy gauge (40110008) and, since 2020, applied to Mannus Creek at Glenroy No.2 gauge (401029). The replacement gauge is located a short distance downstream of the site of former gauge 40110008.

The draft WSP proposes to change the height-based rule to a flow-based rule, using Mannus Creek at Glenroy No.2 gauge as the reference point. The proposed access rule is:

- take is not permitted when flows are less than or equal to 1 ML/day.

A cease to pump rule set at 1 ML/day will ensure continuation of water users' access, improve enforcement and compliance and meet basic environmental needs.

The proposed rule addresses the NRC's recommendations to improve management of Mannus Water Source.

Other Water Sources

For the remaining water sources, access rules are unchanged.

6.1.6 Trading

Trading is an important tool for making both environmental and economic improvements. If trading rules are too restrictive it limits the ability to move take of water out of high environmental value areas to lower environmental value areas, provides no flexibility for water users and hinders the establishment of a water market. Where water sources have medium to low environmental value and are not flow stressed trade should be permitted.

Permitting some trade into and between some of the water sources and management zones is proposed in the draft plan.

In the Murray 2011 plan, trade is prohibited into 9 of the plan's 15 water sources. Trade is permitted into five management zones and a further two water sources, but only if entitlement is first converted to high flow access licence. To date, no conversions to high flow licence have occurred.

In the Murray 2024 plan, it is proposed to allow limited trade of non-high flow access licence into most management zones and water sources. This relaxation recognises new, lower risk ratings than those made at the time of drafting of the 2011 plan. However, there is no change proposed for the two largest water sources that constitute around 80% of all entitlement. Table 5 summarises if additional entitlement will be permitted in each water source. See the report cards for each water source for more details on the proposed trading rules.

Table 5. Changes to trading rules in the draft Murray Unregulated WSP

Water Source	Additional Entitlement
Albury	No Net Gain
Dora Dora	Yes
Hume	Yes
Indi	Yes
Jingellic	Yes
Lower Wangamong	Yes
Majors	Yes
Mannus	Yes
Maragle	Yes
Murray Below Mulwala	No Change, no trade in
Ournie Welaregang	Yes
Swampy Plain	Yes
Tooma	Yes
Tumbarumba	Yes

Water Source	Additional Entitlement
Upper Murray River	No Change, trade in allowed

6.1.7 In-river dams and Town Water Supply

Water Sharing Plans contain specific rules relating to the construction and operation of in-river dams. Current policy prohibits the construction of new in-river dams in 3rd and higher order streams in water sources identified as having high instream value.

The current plan permits in-river dams in 3rd and higher order streams in the Murray Below Mulwala Water Source. The water source is considered to have high instream value. Therefore, the draft WSP will prohibit in-river dams in 3rd and higher order streams in this water source.

The current plan prohibits in-river dams in 3rd and higher order streams in Dora Dora Water Source. This prohibition will be retained in the draft WSP but for the Dora Dora and Murray Below Mulwala water sources, we propose to include an exemption for in-river dam applications that are for town water supply purposes only.

This exemption provides an opportunity for inland towns to consider in-river dams as an option to improve the security, reliability and resilience of town water supplies. This is consistent with the State Water Strategy priority actions for town water supply.

It should be noted applications for a new water supply works approval or to amend an existing approval is subject to a stringent assessment process that considers case-by-case the location and impact of the works being applied for. There is no guarantee an application will be approved as this is determined by the assessment process.

6.1.8 Protection of significant wetlands

In their review of the inland unregulated water sharing plans (WSPs), the Natural Resources Commission (NRC) recommended that the protection for significant wetlands be improved when plans are replaced. Significant wetlands may include internationally (Ramsar), nationally and in some cases regionally, significant wetlands within the plan area. For some plans this recommendation has been broadened to include culturally significant wetlands.

DPE Water in its response to the NRC recommendation, has committed to consider options to improve protection of significant wetlands during the plan replacement process. The department is developing a policy which will include a method for identifying significant wetlands within a plan area and outline new restrictions that will apply. The objective of this policy is to identify significant wetlands within each water sharing plan area based on an agreed set of criteria and apply restrictions which limit extraction and development at current levels.

The department is collaborating with DPE (Environment and Heritage Group) to further refine the draft policy. Feedback received during the public exhibition of inland water sharing plans will be considered before the policy is finalised.

It is proposed that inland unregulated water sharing plans will prohibit new or amended surface water supply works being constructed in significant wetlands. These wetlands are identified in Schedule 4 in the water sharing plan and in a digital wetland map produced by the department. In addition, for identified Ramsar wetlands, no new or amended works can be constructed within or less than 3 km upstream of that wetland. This rule will not apply to replacement surface water supply works.

7. Public exhibition phase and making a submission on the draft plan

The draft *Water Sharing Plan for the Murray Unregulated River Water Sources 2024* will be on public exhibition from 9 October until 17 November 2023.

You can make submissions throughout the public exhibition period. We encourage you to comment on all aspects of the draft water sharing plan, not just those where we propose a change. We will review all submissions carefully and consider the issues raised when finalising the plan.

To find out more about the sessions and the draft plan, visit the [Murray Water Sharing Plan Public Exhibition](#) pages of the department's website. The page includes the draft plan, fact sheets, water source report cards and more information on making a submission.

You will find links to reference and supporting documents that detail historical Murray area water planning processes in 'Appendix A – References and supporting documents'.

8. Finalisation of the draft plan

Following formal public exhibition, we will consider the feedback and issues raised during the consultation process. We will use this to help finalise the plan.

The final water sharing plan must have the agreement of the Minister for Environment and Heritage and the approval of the Minister for Water before it can start.

We expect the final plan will begin on 1 July 2024.

9. Monitoring, evaluation and reporting

Monitoring, evaluation and reporting (MER) are key components of adaptive management. They ensure that water sharing plans are effective in meeting their objectives.

The MER plan will be a framework specifically designed for the water sharing plan. It will follow established guidelines and include both surface and groundwater ecosystems.

The department is working on a project that will prioritise water sources for MER activities, based on risk in areas that have high levels of extraction, ecological value, or stakeholder needs.

The MER plan will be a framework specifically designed for the water sharing plan. It will follow established guidelines and include both surface and groundwater ecosystems.

10. Areas for further work

10.1 Update long-term average annual extraction limits

In New South Wales all water sharing plans include long-term average annual extraction limits (LTAAELs). These limits are designed to protect water resources, dependent ecosystems, and communities from the impacts of over-extraction in the longer term.

Assessment of LTAAEL compliance for inland unregulated water sources will use metering data once 3-5 years of metering data is available. Prior to then, DPE Water will use remote sensing to undertake a risk assessment to determine if there is a risk of extraction being exceeded in unregulated water sources. When the non-urban metering requirements are implemented, metering data will cover up to 90% of water take across NSW. DPE Water will develop a method to fill the remaining gaps in metering data for LTAAEL compliance purposes.

10.2 Wetlands

DPE Water has committed to consider options to improve protection of significant wetlands during the WSP replacement process. The challenge is to identify and determine which wetlands should be considered regionally significant. There is currently no comprehensive wetland assessment and mapping product available for inland NSW that may be used for this purpose.

An internal working group agreed the best approach was to identify wetlands based on existing data sets and use certain criteria to identify those wetlands which should be considered regionally significant.

Further refinement of the policy and methodology for wetland identification and assessment is expected with collaboration with other agencies.

10.3 In-river dams for Town Water Supply

Interagency discussions as part of WSP replacements questioned the appropriateness of the current policy on in-river dams, in part because the policy restricts opportunities to improve Town Water Security. DPE Water have committed to work with agencies to refine the policy to better manage where in-river dams can be applied for and develop guidelines for how those applications are to be assessed.

10.4 Metering and record keeping

We are rolling out the NSW Non-urban water metering program across the state. The new metering requirements mean water users must have metering for works of a certain size and keep logbooks for water extracted using smaller works. For more information, see the [NSW non-urban water metering framework pages](#) on the department's website.

10.5 Climate Change

The department is developing river models that incorporate stochastic long-term data to help guide regional water strategies. We can use these models to inform decisions for future water sharing plan replacements as they are developed across the state.

Appendix A – References and supporting documents

- [Murray Water Sharing Plan Public Exhibition](#) page contains the draft plan, maps and information about the public exhibition period and how to make a submission
- [NSW Legislation website](#) contains NSW legislation, including the WM Act
- [National Water Initiative](#)
- [Water Sharing Plan for the Murray Unregulated River Water Sources 2011](#)
- The [background document for the Murray 2011 plan](#)
- Details of the macro planning approach:
 - [Macro water sharing plans - approach for unregulated rivers \(PDF 829KB\)](#)
 - [Macro water sharing plans – access and trading rules for pools \(PDF 627 KB\)](#)
- The Natural Resources Commission's [Review of the Murray Unregulated River water sharing plan](#)
- [2019 Audit of the Water Sharing Plan for the Murray Unregulated Water Sources 2011](#)

Appendix B – Responses to NRC recommendations

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
R1	<p>The Plan should be:</p> <p>a) extended for up to two years until 30 June 2024, to allow time to complete data collection and analysis</p> <p>b) replaced by 1 July 2024, supported by the completion of the recommendations of this review</p>	<p>DPE Water welcomes the recommendation to extend the Plan for a period of two years to provide for replacement plans based on best available information</p>	<p>The Plan was extended by two years in 2022. It must be replaced by 1 July 2024.</p>
R2	<p>When remaking the Plan, to ensure all extraction under the Plan is managed to protect, preserve and maintain the water sources and dependant ecosystems, DPE-Water should:</p> <p>a) establish and publish sustainable, numeric LTAAELs, ensuring they are based on best available information, including ecological requirements, an accurate estimate of all forms of extraction and climate change</p> <p>b) ensure the LTAAEL includes all forms of interception and extraction</p>	<p>a) The Basin Plan sets an environmentally sustainable diversion limit for each water resource plan area. NSW has committed to preparing WRPs which meet the requirements of the Basin Plan which include demonstrating the SDL has been complied with and, where it has not, what action must occur to ensure extractions are reduced below the SDL. The Murray Unregulated plan was amended in 2020 to include provisions which ensure annual compliance with the SDL, how the SDL is calculated, how it is assessed and what compliance action is to occur if the limit is exceeded. The Basin Plan used the best available information at the time to develop the SDLs for each valley. Any review of extraction limits would need to be undertaken within the framework of the Basin Plan and would likely coincide with a review of sustainable diversion limits for the NSW Murray and Lower Darling Water Resource Plan.</p> <p>b) We note the need for the LTAAEL to include all forms of take (as</p>	<p>See DPE Water response. No further action required.</p>

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
		specified in the plan) and estimates should be as accurate as possible include estimating annual take by basic landholder rights.	
SA1	<p>DPIE-Water should:</p> <p>a) undertake regular LTAAEL compliance assessments</p> <p>b) use AWDs to ensure extraction remains below LTAAELs as required by the Plan rules.</p>	<p>a) In the development of implementation programs for the unregulated water sharing plans, the Department will consider methods for assessing compliance with extraction limits. The implementation of the 2018 Metering regulations will significantly improve the Department's Unregulated LTAAEL and compliance regime.</p> <p>b) water is allocated based on water sharing plan rules to ensure long term water security. Current provisions in the WSP specify how AWDs will be reduced if the LTAAEL is exceeded, to ensure extraction returns to below the LTAAELs.</p>	See DPE Water response. No further action required.
R3	<p>When remaking the Plan, to improve alignment with the priorities in the Act, DPIE-Water should:</p> <p>a) include economic dependence on town water supply when considering social and economic impacts of proposed changes to water sharing rules</p> <p>b) ensure that CTPs are established based on environmental sustainability and basic landholder needs</p> <p>c) specify what the post-augmentation CTPs for Snowy Valleys Council would be in the Plan</p> <p>d) ensure that the Plan rules encourage town water supply augmentation in line with the Plan's objectives.</p>	<p>a) During replacement of the Plan, the assessment of economic dependency will be based on the best available information which may include analysis undertaken for the Regional Water Strategy. Socio-economic assessment will include consideration of industries supplied by local water utilities. Changes will not be made to water sharing arrangements that will impact on the security of TWS.</p> <p>b) During replacement of the Plan, the best available information will be used when reviewing CtP rules. This information includes HEVAE assessments for the 2017 Risk Assessment for the WRP and DPE Water's 2020/21 review and revision of basic landholder rights.</p> <p>c) As part of the augmentation of TWS DPE Water will consider if it is appropriate to include access conditions for Snowy Valleys Council in the Plan.</p> <p>d) Noted.</p>	See DPE Water response. No further action required.

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
R4	<p>When remaking the Plan, DPIE-Water should ensure the Plan facilitates equitable sharing of water by:</p> <p>a) determining the rate of growth in extraction and interception since timeframes set in the Plan rules and estimate growth into the future</p> <p>b) revising Plan provisions to clearly outline how allocations would be adjusted to respond to growth in various types of use where necessary to meet the LTAAELs, and ensuring these rules allocate reductions fairly</p> <p>c) ensuring that any options for reducing allocations where necessary are consistent with the Act and Basin Plan.</p>	<p>a) Implementation of the 2018 non-urban metering regulation will significantly improve the Department's unregulated LTAAEL compliance regime. Until the proposed metering is in place only limited usage data is available. The estimated usage data currently available for some of the water sources within the Plan area indicates extraction is well below the LTAAELs.</p> <p>b) WSPs clearly outline the order by which categories of licence will be reduced if the LTAAEL is exceeded. If a new category of licence is introduced new compliance measures may be included in the plan to specifically manage growth caused by this licence category, if warranted.</p> <p>c) Noted.</p>	<p>See DPE Water response. No further action required.</p>
R5	<p>By 2023, to improve environmental outcomes DPIE-Water should:</p> <p>a) ensure the replacement Plan reflects the latest information on environmental water needs, including from the NSW Murray and Lower Darling LTWP and associated fish and flows advice from the Department of Primary Industries (DPI) – Fisheries</p> <p>b) revise provisions to address identified concerns for medium- to high-risk water sources, including:</p> <p>i. a first flush rule for Tooma River</p> <p>ii. strategies within the scope of the Plan that can help mitigate the extreme flow variability and</p>	<p>a) New information will be considered when reviewing the water sharing arrangements and environmental water requirements (EWRs) will be an important part of the options development stage, where appropriate. DPIE Water has processes in place to incorporate new scientific information into plan replacements including collaboration with NSW Fisheries as part of the development of the HEVAE and Risk Assessment for the plan areas. LTWPs are not designed to develop water sharing rules, they are required under the Basin Plan to implement the Basin Watering strategy. They prioritise ecological assets and include long-term aspiration targets which inform the management of Environmental Water Allowances and Held Environmental Water (HEW) across the Basin. DPIE Water will continue to work closely with DPI Fisheries and EES to develop access rules to improve environmental outcomes where required.</p>	<p>a) See DPE Water response.</p> <p>b) Access rules were reviewed where the Risk Assessment indicated there are risks to low flows. An issues paper was prepared and considered by the Murray unregulated WSP Regional Working Group (RWG). The RWG supported the following:</p> <p>i. Retention of the existing CTP rule of 79 ML/day at gauge 401014. The RWG accepted that a first flush rule is not required in perennial Tooma River.</p> <p>ii. The WSP should not refer to the Snowy Hydro Scheme, over which it can have no control. Cooperative efforts to</p>

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
	<p>provide more stability around base flows to better mimic more natural rates of rise and fall in the Swampy Plains and Upper Murray water sources</p> <p>iii. opportunities to reduce extractive pressure in the Albury and Hume water sources</p> <p>iv. reviewing the current gauging network to identify where new gauges may be warranted to reduce reliance on no visible flow rules in medium- to high-risk water sources</p> <p>c) In consultation with environmental water managers, determine the best mechanism for protection of held environmental water and include those arrangements in the Plan to avoid reliance on temporary water restrictions</p> <p>d) work with DPIE-Environment, Energy and Science (EES) and DPI-Fisheries to identify regionally significant wetlands/off-river pools where water access is currently permitted, assess the risks to these sites and the adequacy of current rules in protecting environmental values from extraction</p> <p>e) consider how plan provisions can help to ameliorate water quality issues, including those arising from the 2019-20 bushfires.</p>	<p>b) Risk-based management assists water managers to prioritise and plan and direct resources to monitor, mitigate or respond to the highest overall risks. The risk assessment can be considered a 'red flag' process to provide guidance for where more detailed investigation may be required during plan replacement.</p> <p>i. First flush rules may be considered for Tooma River, when the access rules are reviewed.</p> <p>ii. Water sharing rules for Swampy Plains and Upper Murray water sources will be reviewed during the replacement of the Plan.</p> <p>iii. Pressures on Albury and Hume water sources are noted in the Risk Assessment and will be considered when reviewing the water sharing rules for the water sources.</p> <p>iv. A hydrometric review of the inland gauging network was undertaken in 2020 and will inform any future investment in infrastructure.</p> <p>c) DPE Water will continue to work closely with the environmental water manager to determine the best mechanism to protect held environmental water and include these arrangements in the plan, where appropriate.</p> <p>d) Noted. Current rules are consistent with the approach developed for unregulated rivers to guide access and trading rules for pools. Both EES and DPI Fisheries are provided opportunities to raise issues which will be considered as part of plan replacement.</p> <p>e) The Murray and Lower Darling water quality management plan refers to the LLS Murray and Western Local strategic plans 2016-2021 as the appropriate plan for the implementation of land management actions that will assist in improving water quality. Potential options to respond to water quality issues may be considered but there is limited ability to resolve land management issues through the WSP.</p>	<p>achieve more natural flows in the Swampy Plain and Upper Murray River water sources should occur through separate processes.</p> <p>iii. Retention of the existing access rules in Albury and Hume water sources. A visible flow is required at the point of extraction. In the Murray WSP, visible flow is defined as full flow through a 200 mm pipe, and so this rule provides more protection than in other WSPs.</p> <p>iv. The WSP area has relatively good coverage by gauges. For example, in Upper Murray Extraction Management Unit, 96% of entitlement is governed by a flow based CtP rule.</p> <p>c) DPE Water have worked with EHG to consider arrangements which may provide better protection of environmental water. For this WSP, it was decided to rely on current arrangements, which include s324 orders in the mid-Murray, for regulated HEW that leaves Murray Irrigation Limited's footprint.</p> <p>d) Provisions have been included to prohibit new surface water works in and within 3 km upstream of internationally significant (Ramsar) wetlands and within nationally and regionally significant wetlands. Trade into the scheduled wetlands will also be prohibited. These wetlands will be listed in a</p>

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
			<p>schedule in the Plan. This rule will not apply to replacement water supply works.</p> <p>The methodology developed by DPE Water has identified more than 100 wetlands in the Murray unregulated WSP area for inclusion in the new schedule. It represents significant improvement in protection of these areas.</p> <p>e) DPE Water’s Science and Planning teams considered this matter and resolved that the issue will be addressed by mechanisms outside of the WSP.</p>
R6	<p>In remaking the Plan, revise the provisions to improve management of the Mannus Creek Water Source by:</p> <p>a) reviewing the environmental values for Manus Creek Water Source and ensuring the flow requirements of threatened species and other environmental values are considered</p> <p>b) reviewing the CTP rules for Mannus Creek and replacing the height rule with a flow condition that references the current Mannus Creek gauge</p> <p>c) ensuring the Plan reflects the changed location of the gauge and reviewing the location of water access licences to check they are in the appropriate water management zone</p> <p>d) including the Mannus Dam operating rules in the Plan and review environmental flow requirements in light of recent studies (including</p>	<p>a) During replacement of the Plan, the best available information will be used when reviewing CtP rules. This information includes HEVAE assessments for the 2017 Risk Assessment for the WRP and studies by DPI Fisheries and CSU/Murray LLS.</p> <p>b) As part of plan replacement the current height rule in Mannus Creek Upstream Management Zone will be reviewed with the aim of introducing access rules linked to the flow reference gauge in the water source.</p> <p>c) When replacing the Plan, the locations of water access licences will be checked in Mannus water source, with particular regard to the slight change in location of the reference gauge for the upstream management zone.</p> <p>d) For unregulated rivers, environmental flow and access conditions are generally specified on the work approval or access licence held by the Local Water Utility (LWU). If the LWU infrastructure is augmented, the</p>	<p>See DPE Water response.</p> <p>a) Environmental values and flow requirements were considered when developing provisions for Mannus Water Source. No further action required.</p> <p>b) The RWG recommends a flow-based access rule in the Mannus Upstream Management Zone. The proposed CtP is flows greater than 1 ML/day at the current Mannus Creek at Glenroy No.2 gauge (401029).</p> <p>c) The Plan Map reflects the location of the replacement gauge 401029. DPE Water have</p>

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
	the five-yearly assessment of environmental impacts), the impact from bushfires and the needs of water users.	existing environmental flow conditions will be reviewed in light of the benefits and potential impacts of the proposed changes. These operational rules may be included in the WSP if it is determined to be appropriate.	reviewed the locations of water supply works and none are affected by the slight change in location of the reference gauge. This matter was considered by the RWG. d) No further action required.
R7	When remaking the Plan, DPIE-Water should take into consideration the native title claims, Indigenous Land Use Agreements (ILUAs), IPAs, and other Aboriginal land agreements in the Plan area – particularly the Bangerang Nation, Yorta Yorta Nation and the Werai IPA to identify cultural values and uses. Sufficient additional time should be allowed to undertake detailed engagement with Traditional Owners and other Aboriginal knowledge holders on options to support these values and uses and make any final amendments.	The amended Plan automatically recognises any native title determinations and ILUAs that have been made and an amendment provision to specifically refer to the native title rights following the granting of a native title claim during the life of the Plan is also included in the WSP. This information would be specific to each determination. The Department liaises with Native Title claimants and determinants regarding water associated with their determination. No immediate update of the Plan is required and no amendments will be made prior to the replacement plan being made as the determination does not specify any specific volumes and no ILUAs have yet been established that are relevant to water. The Department will consider the issue of IPAs and their relationship to the management of water resources.	See DPE Water response. DPE Water are developing an engagement strategy for this plan area as we prepare for public exhibition. The department is exploring a range of options to engage with stakeholders including on-line forums, webinars and one on one appointments via phone or teams.
R8	When remaking the Plan, to better achieve Aboriginal water outcomes, DPIE-Water should: a) identify and protect known high value cultural sites in the replacement Plan b) undertake further work with a range of Aboriginal Traditional Owners and knowledge holders, including Aboriginal women, to better	a) and b) The NSW Government is working with peak Aboriginal bodies on a framework for engagement with an intention to consult with the peak bodies on a range of water related issues including Regional Water Strategies and Water Sharing Plans. It is anticipated that consultation will also occur with local Traditional Owners, Local Aboriginal Land Councils and other local Aboriginal Groups under the Aboriginal Water Strategy. This consultation will include knowledge sharing on water sharing plans	See DPE Water response. DPE Water are developing an engagement strategy for this plan area as we prepare for public exhibition. The department is exploring a range of options to engage with

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
	<p>understand water values and uses, identify the rules to protect them, and support water access and use</p> <p>c) ensure that where additional entitlement becomes available, that Aboriginal water needs are assessed as a priority</p> <p>d) undertake state-wide actions identified in Commission water sharing plan reviews to improve consideration and respect for native title and Aboriginal values in water sharing plans.</p>	<p>and identification of opportunities to improve Aboriginal involvement of water management in NSW.</p> <p>c) and d) DPE Water is working with Aboriginal groups to codesign and deliver an Aboriginal Water Strategy. The design of the strategy will consider the matters raised by the NRC, including access to water. DPE will ensure ongoing engagement with Traditional Owners, communities and relevant stakeholders for the best possible outcomes on Country.</p>	<p>stakeholders including on-line forums, webinars and one on one appointments via phone or teams.</p>
R9	<p>When remaking the Plan, to facilitate improved outcomes, DPIE-Water should include an amendment provision to allow the Plan to be modified as needed in response to changes in the Snowy Scheme program that impact transfers and releases of water into the Plan area.</p>	<p>As previously stated, open ended amendment provisions which do not specify how rules will change and what the impacts are discouraged. The plan can be amended at any time if it is in the public interests to do so.</p>	<p>The RWG determined not to include references to the Snowy Hydro Scheme in the remade WSP.</p>
SA2	<p>To facilitate improved environmental outcomes, DPIE-Water should work with Snowy Hydro Limited (Snowy Hydro) to assess and minimise the environmental impact of water release patterns from the Snowy Scheme on the Plan area's water sources.</p>	<p>Noted.</p>	<p>See DPE Water response. No further action required.</p>

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
SA3	<p>When remaking the Plan, DPIE-Water should ensure that licences for miscellaneous alluvial aquifers are given daily access rules that align with any connected surface water sources managed under the Plan. This would involve:</p> <p>a) reviewing bore logs to determine if any licences in the water sharing plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources are extracting from an alluvial aquifer rather than porous rock</p> <p>b) assessing the potential volumes of alluvial extraction relative to surface water extraction</p> <p>c) publishing the results and, if extraction potential from alluvial aquifers is significant, outline and consult on steps to manage risks.</p>	<p>Noted. The alluvial water sources of the water sharing plan were removed as part of the 2020 plan amendment. Groundwater extraction is managed under the Water Sharing for the Murray Alluvial Groundwater Sources 2020 and this issue should be raised as part of the replacement process for that plan.</p>	<p>See DPE Water response. No further action required.</p>
R10	<p>By June 2023, to improve Plan-based MER, DPIE-Water should:</p> <p>a) refine and implement the NSW Murray and Lower Darling Surface Water WRP Monitoring, Evaluation and Reporting Plan and ensure that monitoring programs not currently identified in this plan are incorporated, for example Macquarie perch monitoring, Mannus Dam environmental monitoring and monitoring of the use of held environmental water in unregulated rivers</p> <p>b) expedite the finalisation and publication of</p>	<p>(a)Noted. The NSW Murray and Lower Darling Surface Water WRP MER Plan was developed specifically for Water Resource Plans to meet the requirements of The Basin Plan.</p> <p>(b) Noted. The Department is currently developing a NSW Water sharing plan monitoring, evaluation, reporting and improvement (MERI) system that includes;</p> <ul style="list-style-type: none"> - MERI framework - prioritisation tool - transferability study - evaluation and monitoring plans <p>DPE Water will work with NSW agencies to ensure an agreed approach to</p>	<p>See DPE Water response. No further action required.</p>

No.	NRC final recommendation	DPE Water response	Action taken for Replacement Plan (July 2023)
	<p>DPIE-Water’s water sharing plan evaluation framework and methods manuals and ensure there is multi-agency support and oversight of their implementation</p> <p>c) identify feasible and appropriate resourcing to support ongoing MER activities</p> <p>d) specify timely reporting requirements of the results of MER activities to support transparency, public awareness and adaptive management</p> <p>e) identify and address critical knowledge gaps to support adaptive management</p> <p>f) use the recently developed prioritisation framework to prioritise MER activities based on values and risk. Clearly communicate how this framework interacts with monitoring plans and publicly report on where and why effort is being targeted.</p>	<p>WSP MER Implementation & Reporting to be published when finalised.</p> <p>(c) Noted. The implementation of any MER programs is dependent on having a defined, long term budget. While every effort to maintain a MER program, the ability to implement aspects in a MER is limited by resources</p> <p>(d) Noted. See response to (b)</p> <p>(e) Noted. See response to (b)</p> <p>(f) Noted.</p>	