

Department of Planning and Environment

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Barwon-Darling: Floodplain harvesting in water sharing plans

What we heard report

September 2022



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, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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Introduction

The NSW Government, through the *Floodplain Harvesting Action Plan*, is committed to licensing, regulating and measuring floodplain harvesting. Floodplain harvesting is the last significant way of taking water to be licensed in the Murray–Darling Basin (the Basin). The government is managing this process in a way that improves trust, confidence and transparency with stakeholders.

In 2008, the NSW Government announced that water users taking water directly from floodplains would need a licence and a water supply work approval. Licences will specify the volume of water users can continue to legally take from floodplains.

Bringing floodplain harvesting into the licensing system will improve accounting for water use and compliance with water laws in NSW, making sure the volume of water taken stays within legal limits. In valleys such as the NSW Border Rivers and Gwydir where floodplain harvesting has grown beyond legal limits, licensing will reduce floodplain harvesting diversions and make more water available for the environment and downstream water users.

To make the rollout of licensing possible, the Department of Planning and Environment developed the *NSW Floodplain Harvesting Policy*, which provides a framework for licensing floodplain harvesting extractions. The policy, first introduced in 2013, is now being put into action across the northern Basin. The rules for floodplain harvesting licences will be set out in water sharing plans.

Water sharing plans are a statutory obligation under the *NSW Water Management Act 2000*. They set out rules for a water source or group of water sources, as well as the rules by which water is distributed to various users. These will include limits on the volume of water that water users can take under a floodplain harvesting licence.

Consultation

The department will consult on the proposed rules that will be included in water sharing plans in each of the five northern inland valleys. We began the consultation process with the Border Rivers in October 2020 continuing with the Gwydir in February 2021, the Macquarie in March 2021, and the Barwon–Darling in June 2022. It is anticipated that the consultation process for the Namoi will commence in December 2022.

The five key rules in the water sharing plans that we asked for stakeholder feedback on are:

- available water determinations
- account management rules
- permanent trade rules
- access rules
- amendment provisions.

The department acknowledges that it is important for the community and stakeholders to raise issues and concerns about the proposed rules for floodplain harvesting licences through a

transparent public submission process. The department encourages members of the community to have their say.

Many complex and varied viewpoints were represented in the submissions about floodplain harvesting in the Barwon–Darling valley.

Because of the complexity of submissions, the department has used a qualitative approach to assess submissions and justify any changes we make to the proposed rules for floodplain harvesting licences. The qualitative assessment approach ensures we consider all stakeholder feedback during the development of the final rules. It also allows the department to consider the underlying complexities of each submission and cater for examples where people have not understood the proposed rules, or where pre-filled submission forms highlight the same issues.

To ensure a balanced and comprehensive approach to consultation, the department is focused on the scope of issues and concerns raised rather than the number of submissions received. It is important that the department understands the reasoning for supporting or not supporting a proposed rule and responds to that.

About this report

This report summarises the feedback the NSW Government received during the public consultation sessions and from written submissions for the Barwon–Darling. The report also outlines the proposed final rules that will appear in water sharing plans and the rationale for these. Additional feedback we received that is outside the scope of rules consulted on is in Appendix 1 – Broader issues.

Engagement methodology

The methodology we used to engage with stakeholders about floodplain harvesting in the Barwon–Darling aligned with the department’s engagement principles. Public consultation must be:

- purposeful – undertaken with a clear understanding of what is to be achieved, and delivering on NSW Government priorities and the department’s corporate goals
- inclusive – identifying and enabling the participation of all relevant stakeholders
- timely – allowing enough time for meaningful consultation, outlining timeframes up front and conducting engagement activities in an efficient manner
- transparent – explaining the engagement process, providing information to allow meaningful participation and setting clear expectations around how participants’ input will inform outcomes
- respectful – acknowledging the needs, experience, perspective and expertise of participants.

Public exhibition of the proposed rules began in the Barwon–Darling on 1 June 2022 and ended on 8 July 2022. On 6 June 2022, the department held a public webinar, and face-to-face meetings were held in Menindee on Wednesday 15 June, Walgett on Tuesday 28 June and in Bourke on Thursday 30 June 2022. Targeted consultation with First Nations was held in Wilcannia on Wednesday 16 June and in Brewarrina on Wednesday 29 June 2022.

Information provided

The content covered in presentations included:

- an overview of the development of the river system model for the Barwon–Darling and how the model was used
- a summary of the downstream effects of licensing floodplain harvesting in the Barwon–Darling
- the proposed rules for floodplain harvesting access licences to be included in the [Water Sharing Plan for the Barwon–Darling Unregulated River Water Source 2012](#).

We also gave information on the public exhibition period and how stakeholders could make a submission.

Six days before the public exhibition and formal start of consultation, the department published a series of technical reports on its website:

- [Barwon–Darling: Floodplain harvesting in water sharing plans – Report to assist community consultation](#)
- [Building the river system model for the Barwon–Darling Valley unregulated river system](#)
- [Floodplain Harvesting Entitlements for the Barwon–Darling unregulated river system: Model scenarios](#)
- [Modelled downstream effects of licensing floodplain harvesting – NSW Border Rivers, Gwydir, Macquarie and Barwon–Darling valleys](#).

These reports give the technical detail to support the implementation of the policy in the Barwon–Darling. They include the modelling results used to determine entitlements and predicted outcomes for downstream communities.

The *Report to assist community consultation* explains the proposed types of rules for floodplain harvesting access licences in the Barwon–Darling. This report was crucial to help stakeholders make an informed submission.

Public consultation

The department emailed stakeholders to notify them of the availability of these reports.

We invited these stakeholders to public consultation events:

- proposed floodplain harvesting licence holders
- farmers
- irrigators
- water user groups
- special interest groups
- Aboriginal community groups
- environmental groups
- the general public.

We did this through targeted emails, direct invitations through the department’s contact database, local advertising, social media and website information.

Consultation purpose

The purpose of consultation was to:

- communicate the proposed rules for floodplain harvesting licences to be included in the Water Sharing Plan for the Barwon–Darling Unregulated River Water Source
- seek public feedback on these proposed rules
- ensure all stakeholders were given the opportunity to comment on the proposed rules before they were finalised
- provide a forum for stakeholders to communicate issues and assist with the effective implementation of the floodplain harvesting licensing framework
- enable the department to respond to stakeholders’ concerns and, where appropriate, make changes to the rules before finalising them.

Stakeholder engagement

To ensure broad and equitable engagement, we extended invitations to the webinar and face-to-face meetings to representative groups for:

- irrigators and other peak water users
- First nations
- environmental interests
- business interests
- Australian Government, NSW Government and other state government agencies
- individuals who had made previous submissions or had attended previous engagement sessions
- regional councils
- local, state and federal politicians.

The department held targeted stakeholder meetings that included representatives from First Nations.

The information we presented was consistent for all stakeholder group meetings.

Table 1 gives stakeholder and submission numbers.

Table 1. Stakeholder engagement outcomes

Engagement platform	Number of stakeholders engaged
Webinar	60
Face-to-face meeting Menindee (15 June 2022)	13

Engagement platform	Number of stakeholders engaged
Face-to-face meeting Walgett (28 June 2022)	15
Face-to-face meeting Bourke (30 June 2022)	13
Targeted meetings	15
Submissions received	40

Final rules

We have developed the final set of rules for floodplain harvesting licences in the Barwon–Darling based on the feedback from targeted consultation, submissions received and intended outcomes of licensing floodplain harvesting. Table 2 lists the final set of rules for floodplain harvesting (unregulated river) access licences, along with their justification.

Table 2. Final rules for floodplain harvesting (unregulated river) access licences

Rule	Justification
Initial available water determination (AWD) of 1 megalitre (ML) per unit share	Given the extensive flooding during the 2021/2022 water year within the Barwon–Darling valley and associated tributaries, an initial AWD (account initialisation) of greater than 1 ML per unit share for the 2022/2023 water year is not required.
Ongoing AWD of 1 ML per unit share The use of AWDs of less than 1 ML per unit share as required to adaptively manage floodplain harvesting	An on-going AWD of 1 ML per unit share is consistent with other licence categories. To allow us to respond flexibly if water use increases the department may apply an AWD of less than 1 ML per unit share to ensure users comply with the extraction limit.
Account limit of 5 ML per unit share	The department will apply a 5-year accounting framework to floodplain harvesting (unregulated river) access licences in the Barwon–Darling Unregulated River Water Source. The size of modelled entitlements for floodplain harvesting (unregulated river) access licences is directly linked to the length of the accounting period. An annual accounting framework, with no ability to carry over water between years, will result in large entitlements. Conversely, a five-year accounting framework would average out the water taken between years, resulting in comparatively smaller

Rule	Justification
	<p>entitlements. 5-year accounting minimises the risk of future growth in floodplain harvesting and the need for corrective action to be taken.</p>
<p>Permanent trade – within the designated floodplain</p>	<p>Floodplain harvesting licences are only issued for works located within the Barwon–Darling Valley Floodplain. This is consistent with the intent of the <i>NSW Floodplain Harvesting Policy</i>.</p> <p>To ensure entitlement associated with floodplain harvesting (unregulated river) access licences remains within the Barwon–Darling Valley Floodplain, a trade rule is proposed to restrict any dealings to works located outside the floodplain.</p>
<p>Permanent trade – trading zones that reflect existing river sections used for unregulated river access licences</p>	<p>In developing trade rules, the department has considered the potential for concentration of floodplain harvesting entitlement on the floodplain. Based on this consideration, it was established that applying the existing river sections as trade zones would prevent any future concentration of entitlement.</p> <p>The department will establish four trading zones that reflect existing river sections applied to unregulated river access licences and apply a trade rule that will prevent any trade between trading zones.</p> <p>Schedule 3 of the Basin Plan 2012 establishes the Basin water market and trading objectives and principles. Free trade of surface water is required except where establishing a restriction is required due to a physical constraint, lack of connectivity, or the environment may be harmed. Trading restrictions must be justified to the Murray–Darling Basin Authority as part of the Water Resource Plan accreditation process.</p>
<p>Permanent trade – no new nomination of works used for floodplain harvesting if located within management zones A or D as established in the <i>Floodplain Management Plan for the Barwon–Darling Valley Floodplain 2017</i></p>	<p>In developing trade rules, the department has considered identified areas with high environmental value and/or cultural values. These identified areas have been defined in the <i>Floodplain Management Plan for the Barwon–Darling Valley Floodplain 2017</i> as Management Zones A & D.</p> <p>The department will apply a trade rule to floodplain harvesting (unregulated river) access licences in the Barwon–Darling Unregulated River Water Source</p>

Rule	Justification
	<p>that restricts the nomination of new works if the work is located within management zone A or D.</p> <p>The intended outcome of this rule is to limit to current levels the rate of take of existing works used for floodplain harvesting that are located within management zones A or D.</p>
<p>Granting or amending water supply work approvals nominated by a floodplain harvesting (unregulated river) access licence</p>	<p>The following rules will be applied to applications for water supply work approvals that are, or are proposed to be, nominated by a floodplain harvesting (unregulated river) access licences in the Barwon–Darling Unregulated River Water Source. These rules are designed to support the trade rules.</p> <p>The department will not grant or amend a water supply work approval that is, or is proposed to be, nominated by a floodplain harvesting (unregulated river) access licence if the water supply work is located or proposed to be located:</p> <ul style="list-style-type: none"> • outside the Barwon–Darling Valley Floodplain, or • for new works – within management zones A or D, or • for existing works – within management zones A or D and the modification would result in an increased capacity for that work, or • outside management zones A or D and would result in an increase in the rate of take for an existing work located within management zones A or D.
<p>Access rules – resumption of flow</p>	<p>Take will be restricted under floodplain harvesting (unregulated river) access licences in the Barwon–Darling Unregulated River Water Source when resumption of flow rules are in effect.</p> <p>This will ensure that any flows on the floodplain, that are part of the first flush event, cannot be accessed by floodplain harvesters and contribute to flows reaching the required target.</p>
<p>Access rules – Menindee Lakes and Wilcannia flow targets</p>	<p>An access rule was proposed that restricted take under a floodplain harvesting (unregulated river) access licence when there was less than 195 gigalitres (GL) in the Menindee Lakes system unless a continuous flow of 4,000 ML or more was forecast to occur in the Darling River at the Wilcannia gauge.</p>

Rule	Justification
	<p>In response to feedback received, the department has increased the target at Wilcannia from a total volume of 4,000 ML of continuous flow to a flow rate of 7,900 ML/day.</p> <p>This flow rate aligns within the flow rates specified in the existing water sharing plan for unregulated river (B class) access licences.</p> <p>From an environmental perspective, this flow rate is within the threshold of a small fresh which has the potential to provide opportunities for ecological outcomes.</p> <p>Small fresh flow thresholds inundate a proportion of key habitat features including benches, large woody habitat and aquatic vegetation that contribute to primary productivity and food webs. Inundation of these features has the potential to enhance opportunities to improve food supply, access to habitat and localised movement for aquatic biota including native fish.</p> <p>Further, this flow rate reflects the minimum flow rate required to completely submerge the Wilcannia weir and support fish passage along the Darling River.</p> <p>This rule will prohibit floodplain harvesting on any day that Menindee Lakes is below 195 GL unless flows remain at or above 7,900 ML/day in the Darling River at the Wilcannia gauge.</p> <p>The department is progressing work on targets to be used in critically dry periods such as restricting B and C class unregulated river access licences in the Barwon–Darling and restricting supplementary water access licences in the NSW Border Rivers, Gwydir, Namoi and Macquarie and Cudgegong Regulated Rivers.</p> <p>These rules for floodplain harvesting would be applied in addition to the proposed critical dry conditions triggers.</p> <p>We heard a significant amount of feedback from stakeholders that advocated for an ‘active’ Menindee Lakes target of 450 GL or 480 GL in lakes Wetherell and Pamamaroo. At the time of writing this report, this feedback was still under consideration by the NSW Government.</p>

Rule	Justification
	<p>Lastly, the NSW Government has committed through the <i>Floodplain Harvesting Action Plan</i> to improving our river system models to represent flows from the floodplain to the rivers and using this to refine the management of floodplain harvesting licences. Accordingly, amendment provisions will be included that require the department to seek independent expert advice on the targets prior to 30 June 2025. This advice will be published, and stakeholder feedback sought on the advice. Based on this process, the targets may be amended.</p>
<p>Amendment provisions to allow for access rules to be introduced or refined when more information is available</p>	<p>Current modelling practices do not adequately represent the return of floodplain flows to the river. Without this information, the department cannot accurately calculate the floodplain's additional contribution to end-of-system flows. This information is critical for the assessment of access rules in achieving environmental and downstream outcomes.</p> <p>In June 2022, public consultation occurred on new draft connectivity triggers that aim to improve connectivity in the northern inland basin.</p> <p>This work has the potential to impact multiple licence categories and an amendment provision will be included in all water sharing plans, regardless of whether floodplain harvesting licences are being issued or not, that allows for connectivity rules to be included should they be approved.</p>
<p>Amendment provisions to allow for trade to rules to be modified in the future</p>	<p>The department will include amendment provisions to allow us to modify existing trade rules or to include new trade rules based on improved information.</p>

What we heard – stakeholder responses

General

Table 3 outlines feedback the department received across multiple consultation sessions and through submissions about the proposed rules. Some of the concerns that were raised in the Border Rivers, Gwydir and Macquarie submission process were raised again in the Barwon–Darling.

Table 3. Department's response to feedback received

Theme	Description	Departmental response
<p>Menindee target of 195 GL</p>	<p>Target to be considered to be too low. Suggested increase to 450 GL or 480 GL with enough water to supply the Lower Darling River for 18 months.</p>	<p>The target of 195 GL at Menindee reflects the commitment made by Government in response to the Select Committee's inquiry into floodplain harvesting.</p> <p>It is important to note that there has previously been no trigger for Menindee that limits access for water users upstream. The 195 GL trigger is a step forward, restricting access upstream to floodplain harvesting.</p> <p>This rule will apply in addition to the proposed critical dry conditions triggers if they are approved. Feedback on the adequacy of the Menindee target is being further considered as part of the finalisation of the critical dry condition's triggers.</p> <p>Further, commitment has been made via the amendment provisions to obtain independent expert advice on the Menindee and Wilcannia targets for floodplain harvesting prior to 30 June 2025. This advice must be published and views from stakeholders obtained. Based on this process, the targets may be amended.</p>
<p>Proposed volumes for floodplain harvesting licences</p>	<p>The proposed volumes to be licensed for floodplain harvesting are too high and will result in an exceedance of the extraction limit.</p>	<p>An extraction limit applies at a water source scale to all forms of water take. Floodplain harvesting entitlement has been determined to ensure that total extraction at the water source scale does not exceed the extraction limit.</p> <p>The share components for a licenced form of take will be larger than the long-term average volume of water taken. For example, 50,000- unit shares equate to an approximate long-term average volume of 20 GL/year.</p>

Theme	Description	Departmental response
Difference between proposed share components for floodplain harvesting licences and the volumes specified in the modelling reports	Stakeholder confusion regarding the difference between the proposed share components of 51.3 GL for floodplain harvesting and the lesser volumes specified in the associated model scenario report.	<p>The department acknowledges this is an issue that requires further explanation and will update its website to provide additional information on the topic.</p> <p>Share components are generally higher than long-term average diversions. This is to account for the inability to take water every year due to access rules, account management rules or decreased water availability. For example, 50,000- unit shares equate to an approximate long-term average volume of 20 GL/year.</p>
Complexity associated with having multiple rules with similar purposes	Stakeholder confusion and operational complexity in relation to multiple rules such as the resumption of flow, proposed 195 GL Menindee restriction for floodplain harvesting and proposed 195 GL Menindee restriction for connectivity.	The department acknowledges that there is complexity in the rules proposed or existing in the Barwon–Darling. This level of complexity is reflective of the importance of this water source in receiving inflows from the northern inland tributaries and providing inflows into the southern inland basin and areas of significant environmental, social and cultural importance, such as the Menindee Lakes system.
No trade for floodplain harvesting	Trade of floodplain harvesting will lead to adverse environmental and cultural outcomes.	<p>The department has considered areas of environmental and cultural importance within the Barwon–Darling Valley Floodplain in developing the proposed trade rules.</p> <p>The proposed trade rules will protect sensitive areas from extraction while preventing any future concentration of entitlement.</p>

In response to proposed rules for floodplain harvesting (unregulated river) access licences

Available water determinations

At the beginning of the water year, the Minister for Water determines the volume of water that is to be credited to each licence category through what is known as an allocation or available water determination (AWD). The AWD varies from year to year and between licence categories and is dependent on a range of factors including dam storage levels, river flows and catchment conditions.

Initial available water determination

Historically, an AWD greater than 1 ML per unit share has been applied to some access licence categories in the first year following the start of a water sharing plan. This recognises the potential carryover from previous years, use of long-term averages in determining the access licence entitlement and the associated need to take more in some years and less in others.

The department proposed and invited feedback on an initial AWD for floodplain harvesting (unregulated river) licenses in the Barwon–Darling of 1 ML per unit share.

Most stakeholders supported an initial AWD of 1 ML per unit share in submissions for floodplain harvesting (unregulated river) licences. Some stakeholders suggested that an initial AWD of 1 ML per unit share or less would be more appropriate, depending on antecedent conditions, while other stakeholder expressed the view that an initial AWD of greater than 1 ML per unit share in line with historical practice.

Table 4 and Table 5 list the main reasons stakeholders gave for supporting or opposing the proposed initial AWD of 1 ML per unit share.

Table 4. Reasons for supporting an initial AWD of 1 ML per unit share

Feedback	Department response
Annual allocations should not exceed 1 ML per unit share	The department agrees that allocations should not exceed 1 ML per unit share.
Support an initial allocation of 1 ML per unit share or less, depending on antecedent conditions	Noted.
Support an initial AWD of 1 ML per unit share or less depending on the final volume of entitlement and whether any extraction limits are being exceeded	<p>The department will use allocations to manage any growth in floodplain harvesting licences that results in an exceedance of the extraction limit. The first assessment of growth will occur in the 2022/23 water year.</p> <p>The final volume of entitlement for floodplain harvesting licences is determined using a plan limit compliance modelled scenario. Based on a long-term average, this ensures that the volume of entitlement will not result in an exceedance of the extraction limit.</p>

Table 5. Reasons for not supporting an initial AWD of 1 ML per unit share

Feedback	Department response
The initial AWD should be greater than 1 ML per unit share to reflect historical practices	Given the extensive flooding during the 2021/2022 water year within the Barwon–Darling valley and associated tributaries, an initial AWD of greater than 1 ML per unit share for the 2022/2023 water year is not required.

Feedback	Department response
Initial AWD should be less than 1 ML per unit share because diversions have exceeded the sustainable diversion limit	Recent modelling for the Barwon–Darling River system has demonstrated that total extractions within the water source are within the extraction limit set under the water sharing plan and in the Basin Plan 2012.

Ongoing available water determinations

Most licence categories specify an AWD of 1 ML per unit share for each year after the first water year (or a lower amount if required to ensure users comply with extraction limits).

All stakeholders supported an ongoing AWD of 1 ML per unit share or less if required to comply with extraction limits. Table 6 lists the main reasons stakeholders gave for supporting the proposed ongoing AWD.

Table 6. Reasons for supporting an ongoing AWD of 1 ML per unit share or less

Feedback	Department response
The annual allocation should be no more than 1 ML per unit share or less, dependent on antecedent conditions	The department will use on-going allocations to manage any growth in floodplain harvesting licences that results in an exceedance of the extraction limit. The first assessment of growth will occur in the 2022/23 water year.
Support an annual AWD of 1 ML per unit share or less to ensure compliance with the extraction limit	Noted
No individual share should be more than 1 ML per unit share	Noted

Account management rules

Account management rules vary across NSW and between categories of access licences. However, they generally consist of a combination of limits on the amount of water that may be:

- taken annually or over a number of consecutive years, or both, or
- held in an allocation account at any time, or
- carried over from one year to the next.

The department proposed the following account management rules for floodplain harvesting (regulated river) access licences in the Barwon–Darling Unregulated River Water Source:

1. Account limit: 5 ML per unit share
2. Can carryover any unused allocation from one water year to the next subject to the account limit not being exceeded.

The department proposed five-year account management arrangements because they:

- control current growth
- provide the optimum level of protection against future growth
- deliver a range of positive environmental benefits
- give licence holders flexibility.

There was misunderstanding by some stakeholders about the account management rules with some stakeholders mistakenly perceiving that 5-year accounting would result in a larger volume of water being taken. Further, many stakeholders believed that 5-year accounting equates to 500% carryover. There was a common objection to a proposed 500% carryover. A carryover of 500% (or 5 ML per unit share) would only occur if full allocations were credited and no water taken for 5 consecutive years.

Table 7 and Table 8 list the main reasons stakeholders gave for supporting or opposing the proposed account management rules.

Table 7. Reasons for supporting 5-year accounting

Feedback	Department response
The accounting period matches the frequency of accessing floodplain harvesting water	Noted.
Large entitlements will result in growth and reductions in allocations	Agree. Entitlement size is comparatively larger under annual accounting, and this will increase the risk of future growth if entitlement is traded to an area with comparatively more frequent access to flood flows or there are changes to way an irrigator uses their licenced entitlement.

Table 8. Reasons for not supporting 5-year accounting

Feedback	Department response
Do not support 500% carryover as it will cause loss of flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights and town water supply.	There is a misconception that 5-year accounting will lead to more water take than annual accounting. Accounting rules are designed together with entitlements to ensure that diversions remain within the water source legal limits. In other words, 5-year accounting and annual accounting will permit the same volume of water to be taken. Event based protections are provided through the access rules.
Oppose the allowance of 500% carryover	Please refer to the response above.
Support annual accounting with no carryover – there is no rationale for this causing larger entitlements	Entitlement size is comparatively larger under annual accounting, and this may increase the risk of growth if entitlement is traded to an area with comparatively more frequent access to flood flows

Feedback	Department response
	<p>or there are changes to way an irrigator uses their licenced entitlement.</p> <p>Appendix 1 to <i>Barwon–Darling: Floodplain Harvesting in water sharing plans – A report to assist community consultation</i> explains the difference in entitlement size between annual, 3-year and 5-year accounting.</p>

Trade rules

There are rules that govern the permanent trade of water entitlements. These rules vary from valley to valley depending on the unique ecological and hydrological characteristics that need protection.

The department proposed to establish 4 trading zones that reflect the existing river sections applied to unregulated river access licences. Further, the department proposed rules that would restrict the permanent trade of floodplain harvesting (unregulated river) access licences between trading zones, which largely reflects the trade rules for unregulated river access licences. This approach ensures consistency, equality of rights and access to the water source.

The department identified areas of high environmental, cultural, and hydrological value as part of the designation of floodplain management zones A and D in the *Floodplain Management Plan for the Barwon–Darling Valley Floodplain 2017*. Based on these identified areas of value, the department proposed to establish a trading zone that reflects management zones A and D in the *Floodplain Management Plan for the Barwon–Darling Valley Floodplain 2017* and to restrict permanent trade of entitlement onto works that are located in those zones.

There was minimal specific feedback received on the proposed trade rules. Many stakeholders objected to any form of trade for floodplain harvesting. However, under the Basin Plan 2012, free trade of surface water is required except where establishing a restriction is required due to a physical constraint, lack of connectivity, or the environment may be harmed. Trading restrictions must be justified to the Murray–Darling Basin Authority as part of the Water Resource Plan accreditation process.

Table 9 and Table 10 list the main reasons stakeholders gave for supporting or opposing the proposed trade rules.

Table 9. Reasons for supporting the trade rules

Feedback	Department response
<p>Supported if it can be demonstrated that they do not result in negative impacts on connecting and low flows</p>	<p>The intent of the trade rules is to prevent concentration of entitlement. This reduces the risk of negative impacts being felt in downstream systems.</p>
<p>Supports permanent trade in the Barwon–Darling</p>	<p>Noted.</p>

Table 10. Reasons for not supporting the trade rules

Feedback	Department response
<p>Trade of floodplain harvesting entitlement is likely to cause environmental and cultural damage</p>	<p>The intent of the trade rules is to prevent concentration of entitlement and protect sensitive environmental and cultural areas of the floodplain.</p>
<p>Trade of floodplain harvesting entitlement fails to meet the nationally agreed requirements of trading rules</p>	<p>Schedule 3 of the Basin Plan 2012 establishes the Basin water market and trading objectives and principles. Free trade of surface water is required except where establishing a restriction is required due to a physical constraint, lack of connectivity, or the environment may be harmed. Trading restrictions must be justified to the Murray–Darling Basin Authority as part of the Water Resource Plan accreditation process.</p> <p>The intent of the trade rules is to meet the requirements of the Basin Plan 2012 while preventing concentration of entitlement and protecting sensitive environmental and cultural areas of the floodplain.</p>
<p>Trade would increase complexity for compliance of works once entitlement has been sold</p>	<p>The removal or modification of a work may be required under section 102 of the <i>Water Management Act 2000</i> following a dealing that results in a significant reduction in entitlement and the works are still able to take overland flow.</p>
<p>Trade would increase the risk of concentration of works within sub catchments</p>	<p>The department has established trading zones to prevent the concentration of entitlement. Further, the rules for water supply work approvals nominated by a floodplain harvesting licence compliment these trade rules by restricting growth in the take capacity of works located within areas of identified environmental and/or cultural value</p>

Rules for water supply work approvals

The department proposed a series of rules for the granting of new water supply work approvals or modification of existing water supply work approvals nominated by a floodplain harvesting access licence. The intended outcome of the rules is to complement and support the trade rules in restricting growth in the take capacity of works located within areas of identified environmental and/or cultural value and ensure floodplain harvesting is restricted to within the designated floodplain, which is consistent with the intent of the *NSW Floodplain Harvesting Policy*.

The rules restrict any new works from being in management zones A and D, as established in the *Floodplain Management Plan for the Barwon–Darling Valley Floodplain 2017*, or outside the designated

floodplain. Further, existing works within management zones A or D cannot be modified if it results in an increased capacity to take water.

There was minimal feedback on the proposed rules. Instead, a general objection was raised to any works being located management zone A or D and a request to remove or modify all unapproved works prior to the issue of floodplain harvesting licences. The latter is considered out of scope and is detailed in Appendix 1 – Broader issues.

Table 11 lists the main reasons stakeholders gave for not supporting the proposed rules for water supply work approvals.

Table 11. Reasons for not supporting rules for water supply work approvals

Feedback	Department response
<p>No floodplain harvesting works should be located in management zones A or D</p>	<p>The intent of the <i>NSW Floodplain Harvesting Policy</i> is to use existing works, that are determined to be eligible, as a basis for determining floodplain harvesting licences. Some of these existing works are located within management zones A or D. Therefore, the rule in its current form is considered appropriate.</p>
<p>Extraction from important wetlands threatens their ability to provide critical drought refuge</p>	<p>The rules are intended to prevent any further works from being located within areas of identified environmental and/or cultural value, such as wetlands, and restricting growth in the rate of take from existing works in these areas.</p>
<p>Maintaining cultural sites needs to be resolved before additional floodplain structures are licensed</p>	<p>Areas of the floodplain that hold cultural value are identified in the <i>Floodplain Management Plan for the Barwon–Darling Valley Floodplain 2017</i> as management zone D. These areas are protected from the impacts associated with flood works, through the rules in the <i>Floodplain Management Plan for the Barwon–Darling Valley Floodplain 2017</i>. Further, these areas will be protected from the impacts of floodplain harvesting works through the rules for water supply work approvals to be included in the water sharing plan.</p>
<p>The potential negative impacts to downstream connectivity would need to be considered in the granting of any approvals</p>	<p>The rules for water supply work approvals aim to protect sensitive areas of the floodplain. In addition, there are a suite of rules in the <i>Floodplain Management Plan for the Barwon–Darling Valley Floodplain 2017</i> that manage the granting or amending of flood work approvals. The combination of these rules will ensure that flood flow connectivity within the floodplain is maintained.</p>

Access rules – resumption of flows

The *Water Sharing Plan for the Barwon–Darling Unregulated River Water Source 2012* contains rules to protect critical first flows after an extended low flow or dry period. These first flows are particularly important to the river and dependent communities. The resumption of flow rule is triggered when a flow event occurs after a continuous period of dry or low flow conditions and prevents water users from accessing the first flow for a period of time. Normal access conditions then apply after the flow has reached the required target.

These rules are intended to reduce the need for a Temporary Water Restriction Order to be made under section 324 of the *Water Management Act 2000*, codifying the conditions when access should be restricted in order to meet the high priority requirements of downstream ecosystems and communities.

The department proposed to place resumption of flow rules on floodplain harvesting (unregulated river) access licences. All stakeholders supported the application of resumption of flow rules to floodplain harvesting. However, many stakeholders suggested that the rules must be made stronger and apply in the northern tributaries. This issue is considered out of scope and is detailed in Appendix 1 – Broader issues.

Table 12 lists the main reasons stakeholders gave for supporting the proposed resumption of flow rule for floodplain harvesting.

Table 12. Reasons for supporting resumption of flow rules for floodplain harvesting

Feedback	Department response
Support no access under resumption of flow	Noted
Support the concept of protecting first flush	<p>The intent of the flow targets is to ensure that critical first flush flows are protected during or following a dry period.</p> <p>This will be achieved through the application of access rules. Specifically, a restriction when Menindee is below 195 GL and the existing resumption of flow rules.</p>

Access rules – Menindee and Wilcannia flow targets

To acknowledge the connectivity between the Barwon–Darling valleys and the northern inland tributary valleys, and ensure flows are temporarily protected from floodplain harvesting during and following extreme dry periods, a series of new access rules are proposed to be applied to floodplain harvesting access licences across the northern Basin, including the Barwon–Darling.

These rules have been established in water sharing plans for the NSW Border Rivers, Gwydir and Macquarie and Cudgegong Regulated Rivers.

The department proposed to apply a restriction to floodplain harvesting (unregulated river) access licences when the total volume in the Menindee Lakes system was below 195 GL, unless a continuous flow of at least 4,000 ML was forecast to occur at the Wilcannia gauge.

Most feedback did not support the proposed target of 195 GL at Menindee Lakes or the 4,000 ML at Wilcannia due to a perceived lack of protection against drought. Many submissions proposed an alternative target of 450 GL at Menindee Lakes and 30 GL for 15 consecutive days at Wilcannia.

In response to this feedback, the department has revised the flow target at the Wilcannia gauge from 4,000 ML of continuous flow to a flow rate of at least 7,900 ML/day. This flow rate is within the threshold of existing flow targets to allow access for unregulated river (B class) access licences. It is also within the threshold of a small fresh which has the potential to provide opportunities for ecological outcomes.

Small fresh flow thresholds inundate a proportion of key habitat features including benches, large woody habitat and aquatic vegetation that contribute to primary productivity and food webs. Inundation of these features has the potential to enhance opportunities to improve food supply, access to habitat and localised movement for aquatic biota including native fish and will deliver some environmental benefits.

The revised flow target also reflects the minimum flow rate required to submerge the Wilcannia weir and support fish passage along the Darling River.

These rules apply in addition to the proposed targets to be used during critically dry periods. The department received a significant amount of feedback from the community in response to draft targets and are still working through this. It is anticipated that these targets will be finalised by the end December 2022.

Lastly, a commitment has been made via the amendment provisions to obtain independent expert advice on the Menindee and Wilcannia targets for floodplain harvesting prior to 30 June 2025. This advice must be published and views from stakeholders obtained. Based on this process, the targets may be amended.

Table 13 lists the main reasons stakeholders gave for not supporting the proposed targets at Menindee and Wilcannia.

Table 13. Reasons for not supporting the Wilcannia and Menindee flow targets

Feedback	Department response
<p>Targets offer no drought protection and will cause ecological damage</p>	<p>The process of licensing floodplain harvesting and applying access rules to those licences will improve environmental outcomes.</p> <p>It is important to note that there has previously been no trigger for Menindee that limits access for water users upstream. The 195 GL trigger is a step forward, restricting access upstream to floodplain harvesting.</p> <p>This rule will apply in addition to the proposed temporary water restriction trigger. Feedback on the adequacy of the Menindee target is being further considered as part of the finalisation of the critical dry condition's triggers.</p> <p>Further, commitment has been made via the amendment provisions to obtain independent expert advice on the Menindee and Wilcannia targets for floodplain harvesting prior</p>

Feedback	Department response
	to 30 June 2025. This advice must be published and views from stakeholders obtained. Based on this process, the targets may be amended.
Menindee target is inadequate to meet the water needs of the Lower Darling	Please refer to the response above.
Proposed target does not account for 125 GL of dead storage in Menindee Lakes	Please refer to the response above.
Flow targets should be based on science	<p>Through the amendment provisions, the department has committed to seeking independent expert advice on the flow targets prior to 30 June 2025. This advice will be published and views from stakeholders obtained. Based on this process, the targets may be amended.</p> <p>Further, under the <i>Floodplain Harvesting Action Plan</i> the NSW Government has committed to improving our river system models to represent flows from the floodplain to the rivers and using this to refine the management of floodplain harvesting licences, including the types of access rules applied.</p>
Targets are not needed as floodplain harvesting only occurs when water is plentiful	The intent of the flow targets is to ensure that critical first flush flows are protected during or following a dry period. This may involve protecting flood flows that may otherwise be taken under a floodplain harvesting licence.
Menindee target should be equivalent to 18 months water supply	<p>The proposed Menindee target will accelerate drought recovery when a drought breaks and there are flows upstream.</p> <p>Importantly, any Menindee target will not categorically stop the lakes from drying up. Extreme droughts are driven by the climate and will continue to occur.</p>
Further work is required on the Menindee target to account for connectivity in the Lower Darling	See response above regarding the commitment made through the amendment provisions.

Amendment provisions

Section 45 of the *Water Management Act 2000* allows the department to amend water sharing plans. To improve transparency and increase confidence amongst stakeholders, we propose including specific amendment provisions that allow for the introduction of access rules:

- to allow flexibility, should environmental flows be targeted to create overbank flow, or
- in response to monitoring, evaluation and reporting outcomes of environmental benefits from licensing floodplain harvesting, or

- in response to improved understanding of the influence of floodplain harvesting on downstream flows, or
- in response to work undertaken as part of the departmental commitment to improve connectivity in the northern Basin.

Amendment provisions were well supported by stakeholders. Stakeholders who supported the proposed amendment provisions regarded them as essential to ensure flexibility to allow changes as improved data becomes available and ensure compensation is not payable when changes are required.

Table 14 lists the main reasons stakeholders gave for supporting the proposed amendment provisions.

Table 14. Reasons for supporting the amendment provisions

Feedback	Department response
Support strong amendment provisions to enable rule changes without triggering compensation	Noted.
Enable change when new information is gained through the metering process and a better understanding of return flows	Noted.
Allow for rule changes once more data is available, and modelling done	Noted.

Default and other rules

The department detailed a series of default rules that are required in water sharing plans. We gave these rules for context; they were not subject to the outcomes of consultation.

Table 15 outlines the final default rules and others, as well as their justification.

Table 15. Final default rules for floodplain harvesting (unregulated river) access licences

Rule	Justification
Application of the plan	Ensure the water sharing plan applies to floodplain harvesting (unregulated river) access licences
Compliance with the extraction limit	This rule will provide for allocations for floodplain harvesting (unregulated river) access licences to be reduced to respond to the exceedance that has occurred within those licences
No temporary trade	Consistent with the <i>NSW Floodplain Harvesting Policy</i>
Mandatory condition of floodplain harvesting access licences	Floodplain harvesting (unregulated river) access licences can only take water from overland flow

Next steps

The department will amend the relevant water sharing plans to ensure the rules for access licences are included and can be applied. An amendment order or remake for the relevant water sharing plan will be made. Amendments will require approval by the NSW Minister for Water and concurrence from the NSW Minister for the Environment.

As a result of the amendments to the water sharing plans for floodplain harvesting, the department will need to amend the relevant water resource plan. The department must then submit the amended water resource plan to the Murray–Darling Basin Authority for reaccreditation.

Appendix 1 – Broader issues

Table 16. Broader issues raised during consultation

Issue	Department response
Do not support the exemption for rainfall runoff All rainfall run off should be licensed, there should be no exemption	The exemption for rainfall runoff collected in a tailwater drain applies throughout NSW. It acknowledges the difficulty in distinguishing between rainfall runoff and used irrigation water collected in a tailwater drain for the purpose of measurement and accounting.
Flow targets used in resumption of flow rules must be stronger to protect higher end of system flows in the northern tributaries	The proposed application of resumption of flow rules to floodplain harvesting did not extend to a review of the targets associated with the rules. These rules were recently introduced following extensive consultation.
Access rules for floodplain harvesting must protect held environmental water inflows from Queensland and NSW northern tributaries	Held environmental water is protected in the Barwon–Darling through active management provisions. These rules are currently not proposed to be applied to floodplain harvesting licences as the inflows do not cause overbank flow.
All unapproved works be removed or modified prior to floodplain harvesting licences being issued.	The Improving Floodplain Connections program, currently being undertaken by the department, will accelerate the process of bringing unapproved or non-compliant flood works in more than 100 priority areas in the northern Basin into compliance by mid-2024.
Inappropriate for the large irrigation industry to be granted new, large access licences when the requirements to provide native title licences under the <i>Water Management Act 2000</i> and cultural water	Water requirements associated with Native Title rights is provided for under section 55 of the <i>Water Management Act 2000</i> . These water requirements are

Issue	Department response
<p>under the Murray-Darling Basin Plan have not yet been met</p>	<p>provided as a basic landholder right and a licence is not required to take this water.</p>
<p>The volume for floodplain harvesting in the Barwon Darling valley in the 2012 water sharing plan was 16.5 GL. The same figure was used for development of the Murray-Darling Basin Plan. But the proposed new floodplain harvesting entitlements are 51 GL</p>	<p>The share components for a licenced form of take will be larger than the long-term average volume of water taken. For example, 50,000 unit shares equate to an approximate long-term average volume of 20 GL/year.</p> <p>Floodplain harvesting entitlement has been determined to ensure that total extraction at the water source scale does not exceed the extraction limit.</p>
<p>No further issuing of floodplain harvesting licences until the cumulative environmental and cultural impacts of floodplain harvesting have been assessed</p>	<p>The licensing of floodplain harvesting will ensure that this form of take can be managed within the extraction limit. Further, the application of access rules and trade rules will protect areas of environmental and cultural importance on the floodplain.</p>