



NSW Border Rivers: Floodplain harvesting in water sharing plans

What we heard report

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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. As floodplain harvesting in the Border Rivers has grown beyond legal limits, licensing will reduce floodplain harvesting diversions and make more water available.

To make the rollout of licensing possible, the Department of Planning, Industry 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. The department expects the licensing framework for floodplain harvesting to be operational in all water sharing plans by 1 July 2021.

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 on 20 October 2020.

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 NSW Border Rivers.

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, based on the outcomes of public consultation. 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 proposals, 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 NSW Border Rivers. The report also outlines the final rules that will appear in water sharing plans and the rationale for these. Additional feedback we received that is outside the scope of these five rules is in Appendix 1.

Engagement methodology

The methodology we used to engage with stakeholders about floodplain harvesting in the NSW Border Rivers aligned with the department's principles. Public consultation must be:

- purposeful – undertaken with a clear understanding of what was 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 would inform outcomes
- respectful – acknowledging the needs, experience, perspective and expertise of participants.

Public exhibition of the proposed rules began in the NSW Border Rivers on 20 October 2020 and ended 30 November 2020. In October and November 2020, the department held a public webinar and a series of six targeted stakeholder meetings via electronic platforms. Face-to-face meetings were held in Inverell on 10 November and in Boggabilla on 11 November 2020.

Information provided

The content covered in presentations included:

- a detailed overview of the development of the river system model for the Border Rivers Valley and how the model was used
- the predicted environmental outcomes of implementing the policy in the NSW Border Rivers Valley
- a summary of the downstream effects of licensing floodplain harvesting in the NSW Border Rivers Valley
- the proposed rules for floodplain harvesting access licences to be included in the *Water Sharing Plan for the NSW Border Rivers Regulated River Water Source*.

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

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

- *NSW Border Rivers: Floodplain harvesting in water sharing plans – Report to assist community consultation*
- *Building the Border Rivers Valley River System Model*
- *Floodplain Harvesting Entitlements for NSW Border Rivers Regulated River System: Model Scenarios Report*
- *Environmental outcomes of implementing the Floodplain Harvesting Policy in the Border Rivers Valley*
- *Modelled downstream effects of licensing floodplain harvesting in the NSW Border Rivers Valley report*.

These reports give the technical detail to support the implementation of the policy in the NSW Border Rivers. They include the modelling results used to determine entitlements, modelled environmental effects and outcomes for downstream communities.

The *Report to assist community consultation* explains the proposed types of rules for floodplain harvesting access licences in the NSW Border Rivers. This report is crucial for stakeholders who want to make an informed submission.

Public consultation

The department emailed stakeholders to notifying 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 NSW Border Rivers Regulated 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 licensing framework for floodplain harvesting
- enable the department to respond to stakeholders' concerns and, where appropriate, make changes to the rules before finalising them.

Targeted stakeholder engagement

To ensure broad and equitable engagement, we extended invitations to the webinar and targeted sessions to representative groups for:

- irrigators and other peak water users
- Indigenous 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:

- southern Basin
- environmental groups
- floodplain graziers
- northern Basin industry groups
- NSW Border Rivers Stakeholder Advisory Panel
- Australian and Basin state governments
- Aboriginal groups.

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

Table 1 gives stakeholder and submission numbers.

Table 1. Number of stakeholders engaged

Engagement platform	Number
Webinar	60
Targeted meetings	66
Face-to-face meeting (Inverell)	10
Face-to-face meeting (Boggabilla)	15
Submissions received	215

Final rules

We have developed the final set of rules for floodplain harvesting licences in NSW Border Rivers based on the feedback from targeted consultation, submissions received and intended outcomes of licencing floodplain harvesting. Table 2 lists the final set of rules along with their justification.

Table 2. Final water sharing plan rules and their justification

Rule	Justification
Initial available water determination (AWD) of 1 ML per unit share	<p>NSW is coming out of an extended period of drought that has seen less water available and allocated across the state. Giving water users a large initial allocation in floodplain harvesting licences would present a risk too small to medium floods that are ecologically important and needed to restart rivers and wetlands.</p> <p>In the past, the department has given other licence categories an initial AWD of greater than 1 ML per unit share to reflect potential carryover¹ from the earlier management or licensing framework. As floodplain harvesting has grown above legal limits, the department cannot justify this carryover.</p> <p>The department will apply an initial AWD of 1 ML per unit share to floodplain harvesting (regulated river) access licences in the NSW Border Rivers Regulated River Water Source. This will be applied pro-rata, ensuring that the initial AWD reflects the amount of time left in the water year once licences are issued.</p>
Ongoing AWD of 1 ML per unit share. The use of AWDs of greater or less than 1 ML per unit share as required to adaptively manage floodplain harvesting.	<p>An ongoing AWD of 1 ML per unit share is consistent with other licence categories.</p> <p>To allow us to respond flexibly if water use increases or the accuracy of calculating the extraction limit improves, a variable limit will be specified for AWDs for floodplain harvesting (regulated river) access licences in the NSW Border Rivers Regulated River Water Source after the first water year.</p> <p>This means that the department may apply an AWD of less than 1 ML per unit share to ensure users comply with the extraction limit. The department may apply an AWD of greater or less than 1 ML per unit share if the accuracy of calculating the extraction limit improves.</p>

¹ Carryover is the amount of unused water that the licence holder can use in a later water year.

Rule	Justification
Account limit of 5 ML per unit share	<p>The size of modelled entitlements for floodplain harvesting (regulated river) access licences is directly linked to the length of the accounting period.</p> <p>An annual accounting framework, with no ability to carry over water between years, will result in large entitlements.</p> <p>Conversely, a five-year accounting framework would average out the water taken between years, resulting in comparatively smaller entitlements.</p> <p>Smaller entitlements resulting from five-year accounting have environmental benefits and will protect against the effects of any future growth in use. They will also give landholders an appropriate level of flexibility to carry over unused allocations between years.</p> <p>The department will apply a five-year accounting framework to floodplain harvesting (regulated river) access licences in the NSW Border Rivers Regulated River Water Source.</p>
Permanent trade – Significant wetlands and lagoons	<p>The department will restrict permanent trade of floodplain harvesting (regulated river) access licences if the trade has the potential to affect the significant wetlands and lagoons identified in Schedule 5 and 6 of the <i>Water Sharing Plan for the NSW Border Rivers Unregulated Rivers 2012</i>.</p>
Permanent trade – within the designated floodplain	<p>Permanent trade of floodplain harvesting (regulated river) access licences is restricted to within the extent of the Border Rivers Valley Floodplain.</p>
Permanent trade – no new nomination of works used for floodplain harvesting if located within management zones A and D established under the <i>Floodplain Management Plan for the Border Rivers Valley Floodplain 2020</i>	<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 Border Rivers Valley Floodplain 2020</i> as Management Zones A & D.</p> <p>The department will apply a trade rule to floodplain harvesting (regulated river) access licences in the NSW Border Rivers Regulated River Water Source 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 the capability of works used for floodplain harvesting that are located within management zones A or D to current levels.</p>

Rule	Justification
Granting or amending water supply work approvals nominated by a floodplain harvesting (regulated river) access licence	<p>The following rules will be applied to applications for water supply works nominations that relate to floodplain harvesting (regulated river) access licences in the NSW Border Rivers Regulated River Water Source. These rules are designed to support the trade rules.</p> <p>The department will not grant or amend an application for a water supply work approval nomination that is related to a floodplain harvesting (regulated river) access licence if it is located or proposed to be located:</p> <ul style="list-style-type: none"> • outside the Border Rivers 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 a work located within management zones A or D.
Mandatory condition for floodplain harvesting (regulated river) access licences	<p>A mandatory condition will be placed on all floodplain harvesting (regulated river) access licences in the NSW Border Rivers Regulated River Water Source to ensure that water can only be taken from the floodplain.</p> <p>This condition will ensure that floodplain harvesting licences cannot take water from rivers or creeks.</p>
Amendment provisions to allow for access rules to be introduced when more information is available	<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 after licensing. This information is critical for the development of access rules for floodplain harvesting (regulated river) access licences.</p> <p>Because of the current difficulty in developing and implementing access rules for floodplain harvesting (regulated river) access licences in the NSW Border Rivers Regulated River Water Source, the department will include amendment provisions that allow us to include access rules in the future when the appropriate information base and management tools are available.</p>
Amendment provisions to allow for trade to rules to be modified in the future	<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 throughout submissions about the proposed rules.

Table 3. Recurring themes raised about the proposed rules

Theme	Description	Department response
Trade	<p>Many of the submissions noted that the department did not provide enough information for stakeholders to make an informed decision about the proposed trade zones.</p> <p>There was significant concern about the trade of floodplain harvesting entitlements and the potential effects on environmental assets and downstream communities.</p> <p>There was also uncertainty about the restriction on temporary trade.</p>	<p>The department acknowledges that the proposed trade rules are highly complex, and that some stakeholders may have needed more explanation.</p> <p>In response to submissions, the department has proposed a series of newer, more simple trade rules.</p> <p>These rules restrict any trade that has the potential to affect the significant wetlands and lagoons identified in Schedule 5 and 6 of the <i>Water Sharing Plan for the NSW Border Rivers Unregulated Rivers 2012</i>.</p> <p>The department will improve communication on the proposed trade rules, their intended outcome and practical implementation for the remaining four valleys.</p>

Theme	Description	Department response
Accounting	<p>There was a general lack of understanding of the linkage between the account management rules, modelled entitlement size, risk to the environment and downstream systems, and potential for growth.</p> <p>Stakeholders sought clarification on the implications of carryover.</p> <p>Many stakeholders mistakenly concluded that 5-year accounting would result in a larger volume of water being taken. This was repeated regularly and conflated 5-year accounting with detrimental effects for rivers, wetlands and downstream communities.</p> <p>Stakeholders were also concerned that 5-year accounting would disadvantage landholders who only have access to floodplain flows less frequently than 1 in 5 years.</p>	<p>The department acknowledges that the linkage between account management rules and entitlement size is counter intuitive.</p> <p>To help stakeholders understand account management, the department has published an animation to illustrate and clearly explain the account management rules.²</p> <p>Annual accounting, without carryover, results in large entitlements. Conversely, 5-year accounting results in comparatively smaller entitlements.</p> <p>It is important to clarify that 5-year accounting will not result in 5 times the entitlement being taken each year. The entitlements provided under 5-year accounting are about 3 times smaller than that provided under annual accounting.</p> <p>The department is confident that the entitlement size associated with 5-year accounting will provide an optimum level of environmental benefits, both within the Border Rivers Valley and in downstream systems and protect against growth if users' behaviour changes.</p> <p>The perception that landholders with access to floodplain flows less often than 1 in 5 years are disadvantaged under the proposed account management rules is incorrect.</p> <p>Entitlement size is related to historical access to floodplain harvesting. Properties with less regular access will receive comparatively larger entitlements to cater for their reduced level of access. The entitlement size lessens this perceived disadvantage.</p>

² www.youtube.com/watch?app=desktop&v=BwphvPc0kdk&feature=youtu.be

Theme	Description	Department response
Connectivity	<p>Stakeholders raised concerns about a perceived lack of consideration for the effects that floodplain harvesting could have on connectivity and contributions to downstream flows.</p>	<p>The department is committed to demonstrating the positive downstream outcomes of licensing floodplain harvesting that we anticipate. The <i>Modelled downstream effects of licensing floodplain harvesting in the Border Rivers valley report</i> gives an analysis of the modelled downstream outcomes. Any gains in upstream systems such as the NSW Border Rivers will translate into the downstream, with additional volumes originating in each of the Barwon–Darling tributary valleys contributing to connectivity between the broader northern basin system and increased flows towards Menindee and into the Murray.</p> <p>We will release subsequent reports that catalogue the effect of policy implementation in the other valleys. Each valley will be looked at individually, with additional analysis of the cumulative effect of licensing floodplain harvesting across the entire northern basin.</p>

In response to proposed rules for floodplain harvesting licences

Available water determinations

At the beginning of the water year, the Minister for Water, Property and Housing determines the volume of water that is credited to each licence category through what is known as an allocation or available water determination (AWD). The available water determination 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 available water determination 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 did not propose an initial available water determination for floodplain harvesting (regulated river) licenses in the NSW Border Rivers. Instead, we invited feedback on a range of values, with 1 ML per unit share at the lower end of the threshold and 5 ML per unit share at the upper end of the threshold.

There was general support for an initial AWD of 1 ML per unit share in submissions, which was echoed in targeted consultation. Table 4 and Table 5 list the main reasons stakeholders gave for supporting initial AWDs of 1 ML per unit share or less.

Table 4. Rationales for supporting an initial available water determination of 1 ML per unit share or less

Feedback	Department response
Stakeholders noted an initial AWD of 1 ML per unit share or less would be the most effective way to manage the detrimental environmental and socio-economic effects of floodplain harvesting on communities.	The department considers an initial AWD of 1 ML per unit share to be a balanced approach that ensures floodplain harvesters have appropriate allocation while acknowledging the recent extended period of drought and the growth in floodplain harvesting. This approach will maintain optimal environmental outcomes.
Stakeholders believed that an AWD of 1 ML per unit share or less would provide an opportunity for the Darling River and tributaries to recover, facilitate connectivity, and create greater equity between water users across valleys.	See above
It was noted that the rules should be reasonable, fair and equitable across the Basin and 1 ML per unit share or less would ensure that.	The initial AWD will be applied on a pro-rata basis to ensure that it reflects the amount of time remaining in the water year when licences are issued. For example, if there are 3 months left in the water year when licences are issued, an initial AWD of 0.25 ML per unit share will be applied.

Table 5. Rationales for supporting an initial available water determination of more than 1 ML per unit share

Feedback	Department response
Stakeholders felt the department should provide a larger AWD to allow for immediate access to the resource if a flooding event occurs. This would reflect the large seasonal variation and unpredictable nature of floodplain harvesting.	An initial AWD of greater than 1 ML per unit share has been provided for other licence categories in the past. This has been to reflect potential carryover from the earlier management/licensing framework. As floodplain harvesting has grown above legal limits, the department cannot justify this carryover.
Feedback received stated that a larger initial AWD would allow for a more adaptable and flexible transition to the new framework.	As above
There was a perception that because of the extended drought period, water users need to access the maximum floodplain harvesting allocation when available to assist with economic recovery.	While large initial allocations would improve access to the resource and potentially drive economic growth, they also present a risk to ecologically important small to medium floods. These floods are needed to restart rivers and wetlands throughout the northern basin, providing connectivity and the 'first flush' after this extended period of drought.

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).

The department needs to respond flexibly if water use increases or if the accuracy of calculating extraction limits improves. To allow for this, the department proposed a variable limit to AWDs for floodplain harvesting (regulated river) access licences after the first water year.

There was a mixed response about this proposed rule. Generally, stakeholders supported a flexible, ongoing AWD as being a valuable management tool in the absence of long-term floodplain harvesting modelling data. Having an AWD that can go above or below 1 ML per unit share would enable a simple valley-by-valley approach to deal with any recalculation of the extraction limit.

Other feedback suggested that specific rules for the use of AWDs would increase certainty and should be illustrated by a range of scenarios. Table 6 and Table 7 list the main reasons stakeholders gave for supporting ongoing AWDs.

Table 6. Rationales for supporting ongoing available water determinations

Feedback	Department response
<p>Stakeholders supported adaptive management in the absence of thorough and long-term data on floodplain harvesting.</p> <p>Adaptive management was considered important so that as conditions change, so too can water determinations.</p>	<p>An ongoing AWD of 1 ML per unit share is consistent with other licence categories.</p> <p>An available water determination of less than 1 ML per unit share can be applied to ensure users comply with any extraction limits and, conversely, the department can apply an available water determination of greater or less than 1 ML per unit share if the accuracy of calculating the extraction limit improves.</p> <p>To allow the department to respond flexibly if water use increases or if the accuracy of calculating the extraction limit improves, we propose having a variable limit for available water determinations for floodplain harvesting (regulated river) access licences after the first water year.</p>
<p>Stakeholders believed a conservative approach should be taken in the initial phase of regulation of floodplain harvesting in order to understand the level of floodplain harvesting.</p>	<p>Improved metering and measurement of floodplain harvesting will give the department important data. The department will incorporate this information into floodplain harvesting models and use it to better manage floodplain harvesting to within legal limits.</p>

Table 7. Rationales for opposing ongoing available water determinations

Feedback	Department response
Stakeholders provided feedback that adaptive management had not been clearly defined and therefore it was not supported. Stakeholders believed that having a set of rules would provide a level of certainty.	<p>The NSW water landscape is in a state of constant change, affected by highly variable climatic factors and seasonal shifts. Because of this ever-changing state, a key objective of water sharing plans is to manage water sources in an adaptive way.</p> <p>After the department determines the size of floodplain harvesting entitlements, the volume of water taken under these entitlements is managed through an AWD. This is standard water management practice for licences in NSW.</p>
Stakeholders noted a preference for water sharing plan rules to be established to provide for a range of scenarios and sequences rather than using AWDs.	<p>The use of AWDs to provide for a range of scenarios is standard water management practice in NSW. For example, in years of drought an AWD of less than 1 ML per unit share is made that effectively reduces take for all licences that fall under that category.</p> <p>The factors and process for making an AWD are established in each respective water sharing plan.</p>

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 NSW Border Rivers Regulated River Water Source:

1. Account limit: 5 ML per unit share
2. Carryover: unlimited, subject to the account limit.

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.

Through feedback received during stakeholder engagement sessions and in formal written submissions, the department recognised that there was a general lack of understanding about the account management rules. Furthermore, the important linkage between the accounting period and the size of entitlements was not clear to stakeholders.

Those who understood the linkage were also able to recognise and acknowledge the balance that five-year accounting would provide. The entitlements produced together with five-year accounting better mimic the variability of the system and floodplain harvesting. Table 8 and Table 9 list the main reasons stakeholders gave for supporting or opposing the account management rules are provided in tables 8 and 9 below.

Table 8. Rationales for supporting account management rules

Feedback	Department response
<p>Stakeholders thought that having a five-year account management rule will ensure future access remains within limits but balances the highly variable nature of overland flows.</p> <p>It was noted that this rule allows individuals to manage their take during times of flood while limiting total take, which means that current and future growth can be better managed.</p>	<p>Five-year accounting rules will produce smaller entitlements that represent average style take. These entitlements return floodplain harvesting to within legal limits while providing significant environmental benefits and an optimal level of protection against the effects of future growth in use.</p>
<p>Stakeholders stated that the proposed five-year account management rule provides balance between entitlements and carryover that mimics the high variability of the system.</p>	<p>Five-year accounting provides a high level of flexibility for landholders who can carry over unused allocation between years over a period that mimics that availability of water on the floodplain.</p>

Table 9. Rationales for opposing account management rules

Feedback	Department response
<p>Some stakeholders indicated a preference for annual account management. Their rationale for annual accounting was transparency, accountability and the ability to adaptively manage the water resource throughout changing conditions.</p>	<p>Annual accounting, without carryover, results in large entitlements that reflect a maximum form of take. Conversely, 5-year accounting results in smaller entitlements that reflect an average form of take.</p> <p>It is important to clarify that 5-year accounting will not result in 5 times the entitlement being taken each year. The entitlements provided under 5-year accounting are about 3 times smaller than that provided under annual accounting. This is due to the impact of carry over on modelled water use behaviour and the difference between observed and expected outcomes.</p> <p>Transparency and accountability outcomes are the same under annual or five-year accounting. Floodplain harvesters must install accurate measurement equipment and send daily water take information to the department via telemetry.</p> <p>Adaptive management of floodplain harvesting is achieved through flexible AWDs and amendment provisions as outlined above.</p>
<p>There were some concerns that 5-year account management favours large irrigators at the expense of all other water users in the Basin.</p>	<p>5-year accounting results in smaller entitlements that reflect an average form of take.</p> <p>Modelled entitlements will be produced through a transparent, equitable process in accordance with established legislation. There is no favouritism or inequity between water users.</p>

Feedback	Department response
Stakeholders believe the proposed 5-year account management rules are unsustainable and are not appropriate for the Border Rivers regions due to infrequency of flows and lack of regular rainfall.	Five-year accounting provides a high level of flexibility for landholders who can carry over unused allocation between years over a period that mimics that availability of water on the floodplain.
Other stakeholders believe that unlimited carryover would see a scenario where floodplain harvesting would capture the majority of all flood events and prevent flood from reaching downstream floodplains.	The department is confident that the entitlement size associated with 5-year accounting will provide an optimum level of environmental benefits, both within the Border Rivers Valley and in downstream systems and protect against growth, if behaviour changes.
Stakeholder's understanding is that 5-year accounting could result in taking 500% of a licensed entitlement in one year and this is 'unfair' and does not comply with principles in the <i>Water Management Act 2000</i> .	<p>It is possible for 500% entitlement being taken in one year. For this to happen, a landholder must have taken no water for the preceding 5 years and have built their account balance through this unused water and carryover rules.</p> <p>This is consistent with existing rules for other categories of access licence in the northern basin and principles of the <i>Water Management Act 2000</i>.</p>

Trade rules

There are rules that govern the permanent trade of water entitlements. These rules vary from valley to valley. Trade rules are established to protect identified areas from adverse effects resulting from the concentration of entitlements in one place.

The department has 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 Border Rivers Valley Floodplain 2020*. Based on these identified areas of value, the department had proposed to establish a trading zone that reflects management zones A and D in the *Floodplain Management Plan for the Border Rivers Valley Floodplain 2020* and to restrict permanent trade of entitlement onto works that are located in those zones.

Many of the submissions stated that the department had not given enough information about the proposed trading zones and that the information presented was highly complex. Some stakeholders indicated that they could not make an informed decision with the information provided.

In response to submissions, the department has proposed a series of **newer, simpler trade rules**.

These rules restrict any trade that has the potential to affect the significant wetlands and lagoons identified in Schedule 5 and 6 of the *Water Sharing Plan for the NSW Border Rivers Unregulated Rivers 2012*.

The department will improve communication on the proposed trade rules, their intended outcome and practical implementation for the remaining four valleys.

Table 10 and Table 11 list the main reasons stakeholders gave for supporting or opposing trade rules.

Table 10. Rationales for supporting trade rules

Feedback	Department response
Feedback received indicated general support for the water trading market. Trade should, however, be limited, based on availability and on particular local environmental and hydrological circumstances.	In accordance with the NSW Floodplain Harvesting Policy, the department will permit permanent trade of floodplain harvesting licences, subject to some limitations.
Stakeholders indicated the importance of establishing a permanent trade market for floodplain harvesting, given the reduction in take required to counteract growth in use above statutory limits.	Permanent trade of floodplain harvesting entitlement will allow water users to purchase additional entitlement from other water users. This additional entitlement could be used to counteract any reduction in take that the licensing framework imposes.
Trade must be enabled to allow water to move between water users, maximising its value, as consistent with the National Water Initiative.	
Some stakeholders believe that allowing trade will allow businesses to adapt to the new policy framework.	See above.
Some stakeholders supported permanent trade but because of infrastructure limitations do not support temporary trading at this stage.	<p>Under the NSW Floodplain Harvesting Policy, the trade of allocations (temporary trade) for floodplain harvesting access licences is prohibited. This is due to the episodic nature of floodplain harvesting events and unique on-farm conditions.</p> <p>Further, there may be instances where works capable of floodplain harvesting will require modification to prevent further floodplain harvesting if a trade out occurs. This would be difficult to do on a temporary basis.</p>

Table 11. Rationales for opposing trade rules

Feedback	Department response
A number of stakeholders could not support the trade rules as they felt the department did not give enough information for stakeholders to make an informed decision.	<p>The department acknowledges that the proposed trade rules are highly complex, and that some stakeholders may have needed more information.</p> <p>The department has proposed a series of newer, simpler trade rules. These trade zones have been designed in a way that allows trade but will reduce the risk to environmental assets in the NSW Border Rivers such as Boobera Lagoon.</p> <p>The department will improve communication on the proposed trade rules, their intended outcome and practical implementation for the remaining four valleys.</p>

Feedback	Department response
<p>Some stakeholders believed that floodplain harvesting is an asset linked to an individual property so should be tied to the land and as such should not be possible to trade.</p>	<p>Floodplain harvesting licences are not attached to the property. Water and land have been separated under the <i>Water Management Act 2000</i> to facilitate trade.</p>

Access rules

Access rules also known as 'Cease or Commence to Pump' (CtP) rules control when water can and cannot be taken and are specified in water sharing plans for the purpose of environmental protection. Access rules usually restrict take when flows at a gauge or known location are below a certain level. Access rules must be designed to achieve a specific, measurable outcome.

Floodplain harvesting access rules would be designed to restrict or limit floodplain harvesting at certain times in order to achieve a specific, measurable downstream outcome.

It is not possible or practical to develop and or implement access rules for floodplain harvesting access licenses at this stage because:

- Access to floodplain flows are unique to each property. This access does not correlate well against flows measured at river gauging stations i.e. high river levels do not mean that a property has access to floodplain harvesting access and vice versa.
- Current models cannot test the efficacy of different access rules or their impacts. That is, it is not possible to quantify whether access rules for floodplain harvesting would deliver the desired environmental and downstream benefits nor is it possible to quantify the impact that these rules would have on reliability of access for floodplain harvesters.

Being able to assess the efficacy of access rules for floodplain harvesting access licenses, has been identified as a critical component for the improvement of floodplain harvesting management. The NSW Floodplain Harvesting Action Plan commits to this from 2021 onwards.

In recognition of the difficulties in developing and implementing access rules for floodplain harvesting, the draft rules proposed the use of temporary water restrictions under Section 324 of the *Water Management Act 2000* in certain circumstances.

The department has received legal advice that the proposed use of Section 324 orders as part of water sharing plan rules is not an option. This is because water sharing plans cannot require nor constrain the circumstances under which the Minister can decide to use a Section 324. Order – the decision to make such an order is at the complete discretion of the Minister. **The proposed rule will therefore not be retained.**

The department is, however, withdrawing this proposed rule. Legal advice has indicated that water sharing plans cannot guide or restrict the Minister for Water's discretionary power under Section 324.

The proposed access rules received mixed support, which has been outlined in Table 12 and Table 13 for transparency.

Table 12. –Support for access rules

Feedback	Department response
Stakeholders noted that Section 324 restriction conditions should be written into each valley's water sharing plan, as each valley has its own characteristics of connectivity and constraints.	Legal advice has indicated that water sharing plans cannot guide or restrict the Minister for Water's discretionary power under Section 324. The department is withdrawing the proposed rule.
The rule was supported by some stakeholders but only for critical human need requirements. It was stated that these need to be clearly articulated and supported by evidence that demonstrates this.	The department is withdrawing the proposed rule.
Stakeholders gave feedback on the importance of protecting flows that will make a difference downstream. This rule will ensure the environment and community at the end of the system have fair and equitable access.	Licensing floodplain harvesting will provide additional flows for downstream communities and the environment as detailed in the <i>Modelled downstream effects of licensing floodplain harvesting in the NSW Border Rivers Valley report</i> . The department is withdrawing the proposed rule.

Table 13 Objections to access rules

Feedback	Department response
This rule was not supported by some stakeholders as it was seen that reliance on a Section 324 order is inadequate for systematic management of the Darling river and its tributaries.	The department is withdrawing the proposed rule.
Stakeholders noted the recommendation in the final report of the <i>Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event</i> . There was agreement with the recommendations that protection of flows for critical water needs must be included in the regulatory and policy framework.	A whole-of-department response to the <i>Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event</i> is being prepared. This response will include considerations for floodplain harvesting. The department is withdrawing the proposed rule.
The rule was not supported by stakeholders who believe that water sharing plans must be allowed to manage the system and if water needs to be recovered, the Basin Plan mechanisms need to deal with this.	The department is withdrawing the proposed rule.

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 to allow us to introduce access rules:

- a) to allow flexibility, should environmental flows be targeted to create overbank flow, or
- b) in response to monitoring, evaluation and reporting outcomes of environmental benefits from licensing floodplain harvesting, or
- c) in response to improved understanding of the influence of floodplain harvesting on downstream flows.

Stakeholders were generally supportive of amendment provisions. Stakeholders who supported the proposed amendment provisions, as well as those who did not, noted that the department needs to further engage with and consult them.

Stakeholders acknowledged that existing amendment provisions in water sharing plans would be enough, so additional provisions would not be needed. Table 14 and Table 15 list the main reasons stakeholders gave for supporting or opposing the account management rules.

Table 14. Rationales for supporting amendment provisions

Feedback	Department response
Stakeholders generally supported the principle of amending water sharing plans as better information becomes available. Stakeholders requested the opportunity to provide feedback via consultation on any amendments that are proposed in the future.	The department is committed to ongoing engagement with stakeholders. We value community feedback and want to continue providing the opportunity for stakeholders to have their say.
Stakeholders supported amendment provisions if they could demonstrate due consideration to full connectivity and the needs of the environment and community.	The proposed amendment provisions have been included to make the future direction of floodplain harvesting rules clear. The department will consider access rules when return flows can be accurately modelled and we better understand how these rules could influence environmental and downstream outcomes.
Stakeholders noted that amendment provisions will allow more flexibility and responsiveness once monitoring, measurement and floodplain harvesting data is improved.	Noted.

Table 15. Rationales for opposing the amendment provisions

Feedback	Department response
Some stakeholders indicated that they believe the proposed amendments are biased towards the irrigation sector at the expense of environment and communities.	<p>The proposed amendment provision will allow the department to introduce access rules in the future for floodplain harvesting licences in the Border Rivers Regulated River, based on improved information.</p> <p>Including access rules would function to improve environmental and downstream outcomes, not take away from them.</p> <p>Examples of improved information include that coming out of the department's monitoring, evaluation and reporting program, or broader departmental actions, such as work being undertaken in response to the First Flush Report or the implementation of the Unregulated Flow Management Plan for the North West.</p>
Some stakeholders felt that the proposed amendment provisions create uncertainty for floodplain harvesting security once the licensing framework begins. Stakeholders requested more clarification and consultation on what this will mean for irrigators.	Noted. The department is committed to ongoing engagement with stakeholders. We value community feedback and want to continue providing the opportunity for stakeholders to have their say.
Some stakeholders did not support amendment provisions because they believe that existing amendment provisions in water sharing plans can refine floodplain harvesting management, so amendment provisions are not needed.	Noted. The additional amendment provisions have been provided for transparency.

Default and other rules

The department detailed a series of default rules to be added to the *Water Sharing Plan for the NSW Border Rivers Regulated River Water Source*. We gave these rules for context; they were not subject to the outcomes of consultation.

The department is withdrawing the proposed rule about taking contaminated run-off because:

1. the proposed exemption for tailwater drains will allow contaminated runoff to be collected during rainfall events, without the need for an access licence
2. we cannot enforce rules to stop users from collecting contaminated runoff. There is no mechanism to determine in real-time if water is contaminated.

Table 16 outlines the final default rules and others, as well as their justification.

Table 16. Final default rules and others, and their justification

Rule	Justification
Application of the plan	Ensure the water sharing plan applies to floodplain harvesting (regulated river) access licence

Rule	Justification
Compliance with the extraction limit	<p>This rule will allow the department to reduce allocations for floodplain harvesting (regulated river) access licences when those licences exceed statutory limits.</p>
Rules for granting or amending water supply work approvals	<p>A water supply work approval must not be granted or amended if it is:</p> <ul style="list-style-type: none"> • nominated by a floodplain harvesting (regulated river) access licence, and • located or proposed to be located: <ul style="list-style-type: none"> • outside the Border Rivers Valley Floodplain, or • within management zones A or D as described in the <i>Floodplain Management Plan for the Border Rivers Valley Floodplain 2020</i>, or • outside management zones A or D but any change to the work would result in an increase in capacity for work located within management zones A or D.
No temporary trade	<p>Consistent with the <i>NSW Floodplain Harvesting Policy</i></p>
Permanent trade	<p>Permanent trade is only permitted within the Border Rivers Valley Floodplain, as described in the <i>Floodplain Management Plan for the Border Rivers Valley Floodplain 2020</i> and specified in Schedule 6 of the Water Management (General) Regulation 2018.</p>
Mandatory condition on floodplain harvesting (regulated river) access licence	<p>Floodplain harvesting (regulated river) access licences can only take water from overland flow.</p>
Permanent trade – restricted to within the Border Rivers Valley Floodplain, as described in the <i>Floodplain Management Plan for the Border Rivers Valley Floodplain 2020</i> and specified in Schedule 6 of the Water Management (General) Regulation 2018	<p>This rule was not taken to public consultation. Floodplain harvesting licences are only issued for works located within the designated Border Rivers Valley Floodplain. A trade rule has been included that will prevent floodplain harvesting licences from taking water from works outside the floodplain. This is seen to be a logical extension of the policy and licensing framework.</p>

Rule	Justification
<p>Granting or amending water supply work approvals nominated by a floodplain harvesting licence is not permitted if the work is located or proposed to be located within management zones A or D, as described in the <i>Floodplain Management Plan for the Border Rivers Valley Floodplain 2020</i>.</p>	<p>This rule was not taken to public consultation.</p> <p>In developing trade rules, the department considered identified areas with high environmental value and/or cultural values. These areas are identified through the designation of management zones A and D in the <i>Floodplain Management Plan for the Border Rivers Valley Floodplain 2020</i>.</p> <p>The department has developed a rule that would restrict the granting of new water supply work approvals or modification of existing water supply work approvals if the work concerned is located within management zone A or D and the water supply work approval is nominated by a floodplain harvesting access licence.</p> <p>The intended outcome of the proposed rule is to restrict growth in the take capacity of works located within areas of identified environmental and/or cultural value. This rule supports the trade rule above.</p>
<p>Granting water supply work approvals nominated by a floodplain harvesting licence is not permitted if it is located or proposed to be located outside the Border Rivers Valley Floodplain.</p>	<p>This rule was not taken to public consultation.</p> <p>Floodplain harvesting licences are only issued for works located within the designated Border Rivers Valley Floodplain.</p> <p>The department has developed a rule restricting the granting of water supply works approvals outside the designated floodplain to support the trade rules above and ensure that floodplain licences cannot take water from outside the designated floodplain.</p>
<p>Mandatory condition that ensures floodplain harvesting (regulated river) access licences can only take from overland flow</p>	<p>This rule was not taken to public consultation.</p> <p>The department has developed a rule to ensure that floodplain harvesting (regulated river) licences only take from overland flow and not from rivers and creeks located on the designated floodplain. This is consistent with the definition of floodplain harvesting under the policy.</p>

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 agreement 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.

The department expects the licensing framework for floodplain harvesting to be operational in all water sharing plans by 1 July 2021.

Appendix 1 – Broader issues

Broader issues raised

Issue	Department response
<p>There was general stakeholder concern about the modelling approach and a general lack of understanding about or confidence in the data used.</p>	<p>The department acknowledges that there is a significant amount of interest in the models used in implementing the NSW Floodplain Harvesting Policy.</p> <p>For more information on how the Border Rivers model was built, the information used and level of accuracy, refer to the Building the Border Rivers Valley River System Model Report, which is available on our website.³</p>
<p>Stakeholders believed that the process of undertaking consultation one valley at a time does not allow consideration of cumulative effects of floodplain harvesting on connecting water systems and provides limited opportunity to make a complete submission without seeing the totality.</p>	<p>The department is currently consulting on proposed rules for floodplain harvesting licences. This is being done for each valley once the modelling for that valley is finalised and associated technical reports released. The type of rules proposed for each valley are reflective of the modelling and predicted environmental and downstream outcomes for that valley. Further, the final set of rules will be subject to valley-specific consultation outcomes.</p> <p>The department decided a valley-by-valley approach was the most appropriate, as the deadline for the rollout of the licensing and approvals framework is 1 July 2021.</p>
<p>Stakeholders objected strongly that there were no environmental rules. Stakeholders repeatedly stated that environmental flows need to be protected as a priority.</p>	<p><i>The Water Sharing Plan for the NSW Border Rivers Regulated River Water Source</i> provides for two environmental flow rules: a daily environmental release and a stimulus flow. In addition to environmental flow rules, there are also licensed entitlements for environmental purposes in the Border Rivers Regulated River Water Source.</p> <p>Environmental water managers use these entitlements to improve environmental outcomes within the regulated river water source. Neither environmental flow rules nor licensed entitlements aim to create overbank flow. Therefore, specific rules to protect these environmental flows from water taken under floodplain harvesting (regulated river) access licences are not warranted.</p>

³ www.industry.nsw.gov.au/_data/assets/pdf_file/0020/326090/model-build-report.pdf

Issue	Department response
Some stakeholders believe that the proposed rules favour the take of water for private gain and are biased towards irrigators.	<p>The department disagrees with this sentiment. The proposed rules will significantly reduce floodplain harvesting in the Border Rivers Region, resulting in more water returning to floodplains, rivers and creeks. We predict that this additional water returning to the floodplain, rivers and creeks will result in significant environmental improvements.</p> <p>Water sharing rules have been developed in accordance with the water management principles contained in the <i>Water Management Act 2000</i>.</p>
Lack of transparency and accountability	<p>The department is committed to managing water equitably and transparently and engaging with stakeholders broadly.</p> <p>As part of this public exhibition, the department has held a public webinar, a series of six targeted stakeholder meetings and two face-to-face meetings to discuss and seek feedback on the proposed rules. Four peer-reviewed technical reports and a report to assist community consultation were published as part of the public exhibition. The final set of rules were based on the targeted consultation, submissions received and intended outcomes of licencing floodplain harvesting.</p>
The proposed rules fail to meet the objectives of the legislation.	<p>The department disagrees with this sentiment and has released a document with this report that describes why this water sharing plan meets the requirements of the <i>Water Management Act 2000</i>.</p>
Stakeholders expressed a view that there is a disconnect between water sharing plans across the Basin and they need to be better aligned with one another.	<p>The department acknowledges that this issue is important and has been identified in regional water strategies as an option for further investigation.</p>
There are different floodplain harvesting estimates in various reports.	<p>The department has committed to ongoing improvements to modelling once more data becomes available.</p> <p>The draft NSW Border Rivers Surface Water Resource Plan will be updated to include updated modelling information.</p> <p>We are working closely with the Murray–Darling Basin Authority to ensure that draft water resource plans are amended as needed and in a timely fashion.</p>

Issue	Department response
<p>Stakeholders referred to the ICAC (Independent Commission Against Corruption) and stated that the actions that led to the findings of the ICAC report are being repeated in the licensing of floodplain harvesting.</p>	<p>The department is currently formulating a formal response to the <i>Investigation into Complaints of Corruption in the Management of Water in NSW and Systemic Non-Compliance with the Water Management Act 2000</i> released on 27 November 2020.</p>
<p>Stakeholders referred to Slattery and Johnson's recent findings about the significant growth of on-farm storage capacity and development in the Northern Basin since 1994.</p> <p>Stakeholders were concerned about this increase and the limited public information about the location and legal status of floodplain structures.</p>	<p>The department has published information about the effect of floodplain harvesting growth in the northern Basin on our website.⁴</p>
<p>Floodplain harvesting needs to be fully measured and monitored before new licences are granted.</p>	<p>In July 2020, the department released the Floodplain Harvesting Measurement Policy 2020.⁵ This sets out the objectives, methods and rules for floodplain harvesting measurement and the steps to become ready for measurement. The department has used multiple lines of evidence to estimate current and historic floodplain harvesting. Licensing will allow us to control the growth that has already happened, and we will use floodplain harvesting measurement to refine water sharing plan rules overtime.</p>
<p>Lack of consultation and engagement with Aboriginal communities.</p>	<p>The department has engaged the Northern Basin Aboriginal Nations to consult and engage with First Nations people on the draft floodplain harvesting rules that are to be included in the water sharing plans across all five northern basin valleys. <i>Floodplain harvesting and Indigenous Nations in the Northern Murray–Darling Basin: Community consultation outcomes report</i> will outline the predicted outcomes from licensing floodplain harvesting from a First Nations' perspective. It will also detail how cultural values, assets and uses can be protected.</p>

⁴ www.industry.nsw.gov.au/water/plans-programs/healthy-floodplains-project/about/impact-of-floodplain-harvesting-growth-in-the-northern-basin

⁵ www.industry.nsw.gov.au/_data/assets/pdf_file/0005/317093/floodplain-harvesting-measurement-policy.pdf

Issue	Department response
<p>Stakeholders are disengaged, frustrated and confused by the number of engagements and public exhibitions about water.</p>	<p>The department acknowledges this feedback but recognises the most effective way to successfully manage water is by collaborating with stakeholders and the greater community.</p> <p>We are committed to continuously improving the way we work. You can provide feedback on the services provided by the department to water.relations@dpie.nsw.gov.au</p>
<p>Ban floodplain harvesting.</p>	<p>In 2013, the NSW Government introduced the Floodplain Harvesting Policy to stop unconstrained floodplain harvesting by bringing it into a licensing framework that will be the basis for a compliance and enforcement regime. Implementing the policy will function to restrict current floodplain diversions so that they return to statutory limits.</p> <p>There is a misconception that not licensing floodplain harvesting will mean less water use in the northern Basin. Instead, the water historically taken by floodplain harvesting within legal limits will be taken by other licence categories, causing significant impacts on river connectivity and downstream water users.</p>