

Implementing the NSW Floodplain Harvesting Policy: consultation outcomes

Outcomes from community engagement

Published by NSW Department of Industry

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First published June 2018.

More information

NSW Department of Industry

industry.nsw.gov.au

INT18/85817

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Introduction

The *NSW Floodplain Harvesting Policy 2013* signalled an important reform in floodplain water management. The policy will apply across NSW but is currently being implemented in five northern valleys where floodplain harvesting is most prevalent: the Border Rivers, Gwydir, Namoi, Barwon–Darling and Macquarie valleys. This is being done through the NSW Healthy Floodplains project—one of five key projects in which the NSW Government is investing to secure a sustainable water future for the state.

Background

The Floodplain Harvesting Policy was approved by the NSW Government in May 2013 following a period of targeted consultation in 2008 and public exhibition in 2010. These consultations built on earlier statements announcing the government's intention to manage floodplain harvesting activities.

The policy aims to manage floodplain water extractions more effectively in order to protect the environment and the water supply for downstream users, ensure compliance with the requirements of the *Water Management Act 2000* and meet the objectives of the National Water Initiative.

The full policy and floodplain harvesting licensing fact sheet are available on the NSW Department of Industry's water website (water.nsw.gov.au).

Consultation paper

Implementation of the Floodplain Harvesting Policy in the Gwydir and Border Rivers revealed some issues that required further consideration prior to rolling out the policy across NSW. In March 2018 the government released the *Implementing the NSW Floodplain Harvesting Policy* consultation paper during public consultation under the Water Reform Action Plan. The paper sought feedback on the:

- management of rainfall runoff
- monitoring of floodplain harvesting
- proposed approach to account-management rules for floodplain harvesting.

Stakeholders were able to email or post their feedback to the NSW Department of Industry (the department), or lodge the feedback form electronically through the *Have Your Say* website. The consultation period formally closed on 15 April 2018. Over 50 submissions were received.

We recommend you read this outcomes paper in conjunction with the [Implementing the NSW Floodplain Harvesting Policy consultation paper](#) available on the NSW Department of Industry's website (industry.nsw.gov.au/water-reform/consultation).

Rainfall runoff

Rainfall runoff¹ harvesting occurs when landholders capture and store runoff from their developed areas. Industry best management practice suggests that capturing this water can improve water efficiency and reduce potential stormwater pollution issues. Existing licence conditions require that a proportion of this rainfall runoff ('drainage' or 'used water') is not discharged to waterways.

Implementation of the Floodplain Harvesting Policy has highlighted some ambiguity in relation to the treatment of rainfall runoff harvesting, principally because the definition for floodplain harvesting excludes storm water captured in accordance with licence conditions or best management practices approved by the department.

Consultation questions

1. Should rainfall runoff be included (option 1) or excluded (option 2) in the floodplain harvesting licencing framework?
2. If rainfall runoff were included in the floodplain harvesting licencing framework, would you support the development of an approach that would allow agriculturally contaminated water to be retained on farm to prevent pollution of waterways?

Summary of feedback received

There was wide support for incorporating rainfall runoff in floodplain harvesting licences. It was noted that this would inform a robust modelling and assessment process. On the other hand, some respondents, including NSW farmers and irrigators from the Namoi Valley, noted that there had been a previous commitment from government that rainfall would be excluded from floodplain harvesting licences under certain conditions, and suggested this position should be retained.

A number of stakeholders noted that all water take should be licensed, and that this would uphold the intent of the Murray–Darling Basin Plan. Some stakeholders acknowledged the need for exclusions under particular circumstances.

Additionally, there was comprehensive agreement from stakeholders that contaminated waters should be prevented from reaching waterways. It was suggested this was good policy.

Multiple responses argued that any rainfall runoff take should be offset by a reduced take elsewhere. Specific feedback received to questions 1 and 2 can be found at Attachment A.

Proposed policy response

In response to feedback on question 1 the government is proposing to clarify the policy to make it explicit that floodplain harvesting includes water take from rainfall runoff.

Given the feedback received from question 1, the department has considered options that would allow legal capture of agriculturally contaminated runoff at times where there is insufficient floodplain harvesting licence water allocations to cover such capture.

The department is of the view that the most effective way to address this issue is for the *Water Management Act 2000* to allow the take of contaminated rainfall runoff that has not yet been credited to a water user's account in circumstances set out in relevant water-sharing plans. This is subject to water take being debited

¹ Rural landholders in NSW are allowed under a harvestable right to build dams on minor streams that capture 10% of the average regional rainfall run-off on land in the Central and Eastern divisions and 100% in the Western Division. The definition of floodplain harvesting in the policy excludes the taking of water under a basic landholder right, including water taken under a harvestable right.

from accounts when future available water determinations are made. Modelling shows that this approach will provide the dual benefit of ensuring no growth in use and providing flexibility for agriculturally contaminated water to be retained.

The government now proposes to:

- clarify that the Floodplain Harvesting Policy includes the capture of rainfall runoff in the definition of floodplain harvesting, meaning eligible rainfall runoff will be factored into any floodplain harvesting licence entitlements
- amend the *Water Management Act 2000* to allow the capture of contaminated water under floodplain harvesting access licences when water users have insufficient account balance remaining. The relevant water sharing plan will define when water can be taken. This water take will be debited from the respective accounts when future water allocations are made.
- review the operation and application all floodplain harvesting rules in water-sharing plans in the fifth year of implementation.

Monitoring of floodplain harvesting

There is no monitoring of floodplain harvesting extractions, mainly because floodplain harvesting has remained unlicensed for more than 30 years. The complexity of many harvesting works and their link with the operation of other irrigation infrastructure are also factors.

As a result, the government's consultation paper proposed a staged approach to the implementation of floodplain harvesting monitoring, which aims to improve rigour over time. This staged approach includes:

- a minimum requirement for water users to measure storage volume through gauge boards and calibrated storage curves to account for floodplain harvesting during the first three years of implementation
- identifying alternative measurement approaches during the first two years of implementation
- evaluating the performance of the minimum requirement and alternative approaches against the policy objectives after the first two years of implementation
- implementing, if required, a revised minimum requirement after the third year of implementation.

Consultation question

3. Do you support the proposed staged approach to floodplain monitoring?

Summary of feedback received

Numerous stakeholders were supportive of the staged process to improving the monitoring of floodplain harvesting. A number of stakeholders also supported the use of remote sensors, gauge boards and calibrated storage curves.

However, concerns were raised around the accuracy and reliability of such an approach and how the department would use the data to accurately monitor floodplain harvesting. Respondents also cited concerns about:

- the lack of available data and technology informing the program
- the accuracy of measuring methodologies
- the capacity for the NSW Government to adequately monitor and enforce floodplain monitoring
- floodplain harvesting being too difficult to regulate.

Proposed policy response

The government now proposes to:

- clarify the Floodplain Harvesting Policy to make clear that the monitoring of floodplain harvesting will be undertaken in the following staged way:
 1. In the first three years after floodplain harvesting licences come into effect, licence holders will be required to measure changes in on-farm storage volumes using gauge boards and calibrated storage curves.
 2. During this time, the department will evaluate the performance of the approach and explore alternative approaches (including remote sensing and continuous storage monitoring).
 3. If it is determined that an alternative monitoring approach is preferred, the alternative will be implemented after the first three years
- through the Healthy Floodplains project provide up to \$3 million for the installation of gauge board and storage capacity surveys to enable the implementation of this policy on the commencement of licences in the Northern Basin
- develop and publish the NSW program for improving the measurement of floodplain harvesting by 30 June 2019
- as part of stage two of the Healthy Floodplains project, develop and publish a floodplain harvesting compliance and enforcement strategy prior to 30 June 2019.

Establishing account management rules for floodplain harvesting

The policy establishes floodplain harvesting licence account management rules that provide for unlimited carryover and an annual usage limit of 500% of the licence volume. These rules were developed using a version of the Gwydir integrated quantity-quality model that grouped all water users into river reaches.

The updated modelling represents each farm individually and this assessment has shown that the proposed account management rules will not effectively manage growth in use and will lead to inequitable impacts between individuals.

The consultation paper proposed that a more flexible approach be taken. Rules would be developed on a valley-by-valley basis to ensure that any current growth in use is managed and that individual impacts resulting from the framework are distributed as evenly as possible.

Consultation question

4. Do you support the proposal to provide flexibility through the development different floodplain harvesting account management rules on a valley-by-valley basis?

Summary of feedback received

Feedback from all stakeholder groups was varied on this proposal, with some in favour of flexibility, while others were against it or unconvinced of the need.

Those in support recognised that each valley is unique and suggested the government work with valley-based groups to create a policy that is consistent yet acknowledges differences and ensures transparency and proper public consultation, including through public meetings.

Stakeholders opposed to the proposed flexibility were concerned that:

- flexibility in account management rules will significantly compromise the transparency of the process
- there is insufficient evidence to demonstrate the need for flexibility
- high-quality, accurate measuring and calculation methods must be adopted before flexible approaches can be adopted
- flexibility will lead to an overcomplicated compliance system that is open to exploitation.

Proposed policy response

It is proposed that the Floodplain Harvesting Policy be clarified to allow development of floodplain harvesting licence account management rules on a valley-by-valley basis. Concerns relating to transparency and the need for further evidence will be managed by publicly consulting on the proposed rules as part of the water sharing and water resource planning processes.

General comments received

Some submissions provided comments and feedback relating to floodplain harvesting generally, environmental impacts of floodplain harvesting and a lack of transparency and current monitoring. A summary of general comments and feedback is provided at Attachment B.

Some of the comments received were outside the scope of the consultation paper. Where possible these comments will be considered under other aspects of the NSW Healthy Floodplains Project or the development of water resource plans under the Murray–Darling Basin Plan.

Attachment A—Specific feedback received

Question 1

There were a range of views provided on whether or not rainfall should be included (option 1) or excluded (option 2) from the floodplain harvesting licencing framework.

Following are examples of respondents who supported rainfall being included in the floodplain harvesting licencing framework:

- **Murray Darling Association** felt that rainfall collected in the floodplain diversions should be included in the licencing framework and measured in entitlements, with the same provisions applying to all licence holders. This group noted that it is important to clarify how this approach works with the farm dams policy in relation to harvesting 10% of rainfall.
- **University of NSW** noted that the intent to capture all floodplain harvesting diversions within the licensing framework is supported, but felt that it needs to rely on more rigorous data. It was suggested that it is important to recognise that this should not gift an additional volume of water for extraction.
- **Gwydir Valley Irrigators Association** recommended that the NSW Government implement a floodplain harvesting policy that provides the most secure legislative option for continuing legitimate access into the future, and understands this to be representing floodplain and rainfall runoff as a licence.
- **Auscott** was supportive of the inclusion of rainfall in the licencing framework, with no fees charged for the rainfall runoff component and usage subject to a five-year rolling average.
- **Commonwealth Environmental Water Holder** noted its support for a floodplain harvesting regime that sees all floodplain harvesting managed within the licencing framework.
- **Australian Floodplain Association** felt that rainfall runoff should be included in the floodplain harvesting framework.
- **WaterNSW** was supportive of option 1 as it felt this would provide the most robust and practical framework for the licencing of floodplain harvested water.
- **Environmental Defenders Office NSW** recommended including rainfall runoff in the floodplain licencing framework.
- **Brewarrina Shire Council** favoured a position where rainwater runoff collected in floodplain diversions and on-farm storages is measured in entitlements and that the averages relate to long-term, not short-term average rainfall run-off, as this is likely to have a better environmental outcome.
- **Orange and Region Water Security Alliance** was supportive of rainwater harvesting being included in the licence entitlement and that any rainfall interception should be offset by a reduction in other forms of extraction.
- **Inland Waterways Rejuvenation Association** felt that rainfall run-off should be included in the licencing framework as it was clearly a form of take.
- Some individual property owners noted support for option 1 as they were of the view that rainfall should be included in the licencing framework.

Following are examples of respondents who opposed rainfall being included in the floodplain harvesting licencing framework:

- **NSW Farmers Association** opposed the inclusion of rainfall runoff in the licensing framework, and noted significant concerns regarding the change in approach very late in the rollout of the Healthy Floodplain Project. It was also suggested that the NSW Floodplain Harvesting Policy brings this form of water use under the *Water Management Act 2000* by establishing a rainfall runoff harvesting allowance and new floodplain harvesting licence entitlements. It was noted that the allowance was included in recognition that retaining rainfall runoff on-farm is recommended practice and in many cases is required under licences or approvals.

- **Namoi Water** noted its support for the creation of an allowance (exemption) for rainfall runoff for those who meet the eligibility criteria developed under the NSW Floodplain Harvesting Policy. Namoi Water noted that the intention was to implement an exclusion when the policy was first developed, and to now suggest rainfall will be included is misleading. Namoi Water's position was supported by submissions from members of the group.
- Some individual property owners noted support for option 2, not supporting rainfall being included in the licencing framework.

Question 2

Most responses to this question supported action to prevent contaminated water from entering waterways. Examples of responses included:

- **Australian Floodplain Association** was supportive, and noted that this will also minimise the potential for long-term contamination of waterways.
- **Murray Wetlands Working Group** felt that strict compliance measures should be enforced to minimise the risk of water contamination from agricultural activities.
- **Farmweb** suggested that it is a good policy to hold contaminated and potentially contaminated water on farms for reuse.

A number of the stakeholders noted that contaminated water should be managed as per licence conditions under the *Water Management Act 2000*.

Some comments outlined the need for strict compliance measures and to make breaches subject to penalty provisions.

Question 3

Following are examples of responses that were supportive of the proposed staged approach:

- **Australian Floodplain Association** felt that the implementation of any monitoring of floodplain harvesting diversion is an improvement.
- **Gwydir Valley Irrigators Association** was supportive of the recommended staged approach to floodplain harvesting monitoring that recognises advances in technology that improve accuracy, provided it continues to recognise monitoring principles including: shared outcomes, irrigator choice, fitness for purpose, cost-effectiveness, achievability, repeatability and auditability.
- **Border Rivers Food and Fibre** noted its support for the approach.
- **Leeton Shire Council** was supportive of a staged approach to introduce the monitoring of floodplain harvesting diversions.
- **Orange and Region Water Security Alliance** was supportive of a staged approach to introduce monitoring of floodplain harvesting.
- **Commonwealth Environmental Water Holder** noted that the measures outlined in the paper for take to be estimated in the initial implementation period based on storage volume measured from gauging boards could be strengthened to be consistent with proposals for metering or take by other access licences.
- **WaterNSW** noted that a staged approach to floodplain monitoring is preferred given the complex environment and delivering of this policy requires significant resourcing.
- **Namoi Water** noted that monitoring of floodplain harvesting is supported, in particular the use of gauge boards and calibrated storage curves as they provide appropriate information to account for annual floodplain harvesting volumes.
- **Individual property owners** had a range of views generally supporting a staged approach.

Following are examples of respondents that noted concerns over the proposed staged approach to monitoring of floodplain harvesting:

- **University of NSW** suggested that the proposed staged approach is not clear in providing direction on what needs to be measured and which organisations or individuals will be responsible for such monitoring. It also commented that the independent regulator should be collecting data to monitor floodplain harvesting independently of users. Some recommendations were put forward including:
 - that floodplain harvesting could be measured, where appropriate, by installing a 'second-lift' pump that would meter the amount of water taken from a channel and stored
 - that government specifies which alternative measurement techniques are already available, including remote sensing and the use of LiDAR for determining the path of water flows and storage volumes.
 - a plan be prepared setting out in which parts of NSW the staged implementation will occur, and to be clear exactly how performance will be evaluated and how this meets the objectives of the policy.
- **Inland Rivers Network** suggested that the staged approach using gauge boards and calibrated storage curves will be difficult to regulate to ensure compliance with licence conditions.

Question 4

Following are examples of responses that supported the proposal to provide flexibility through the development different floodplain harvesting account management rules on a valley-by-valley basis:

- **Cotton Australia** urged the government to work with valley-based groups towards a policy that balances a desire for consistency with recognition that each valley is different.
- **Border Rivers Food and Fibre** was supportive of the valley-by-valley approach.
- **Namoi Water** was supportive of individual valley-specific account rules developed with proper transparent consultation processes.
- **Commonwealth Environmental Water Holder** noted its support for a floodplain harvesting regime that ensures all floodplain harvesting is managed within the licencing framework, and that the approach recognises the variability of the impacts between valleys through the development of valley-specific floodplain harvesting licences and management arrangements.
- **Auscott** noted that the water sharing plan process results in different account rules for different catchments, so it is essential to take a valley-by-valley approach to account management.

Following are examples of responses that did not support the proposal:

- **Inland Rivers Network** suggested there needs to be much more information provided before the rationale for this flexibility in account management is fully understood, let alone adopted. It also requested a greater level of transparency and community consultation on this issue before draft water sharing plans are placed on public exhibition.

Some commentary was also provided around the need for more data and analysis. Examples included:

- **NSW Farmers Association** was concerned that the level of data available differs from valley to valley, and that a standardised approach is needed before further aspects of the framework are undertaken.
- **Gwydir Valley Irrigators Association** suggested that individuals at this point in time across the five northern valleys do not have the same level of information available to them to assess their preference for one policy approach over another. The fact that not all valleys have upgraded model results and indicative licence volumes presents a challenge for everyone in assessing whether a program is enabling legitimate access or seeking to reduce legitimate access, now and into the future. It was suggested that despite the consultation process there continues to be key outstanding issues that the NSW Government has not clearly communicated. This group recognises there may have to be a valley-by-valley approach. It was recommended that the NSW Government implement a floodplain harvesting policy that provides the most secure legislative option for continuing legitimate access into the future and understands this to be representing floodplain and rainfall runoff as a licence.

- **NSW Irrigators Council** raised its concerns that not all valleys have the same level of data information, hence it is significantly more challenging to comment on a preferred approach without the specific facts. This group recommended the consideration of consistency and equity in the approach taken to develop a floodplain harvesting policy.
- **University of NSW** noted the need for additional data.
- **Commonwealth Environmental Water Holder** agreed that the proposed policy is a step in the right direction, but some additional analysis is required.

Attachment B—General responses and comments

A number of respondents provided comments relating to:

- a general criticism of floodplain harvesting with recommendations ranging from a need for more transparency and monitoring, to making floodplain harvesting illegal with existing earthworks and diversions removed
- environmental impacts of floodplain harvesting on river ecosystems
- impacts on adjacent properties and downstream water users, and the possibility of compensation for downstream water users
- a lack of transparency and current monitoring
- a need for a comprehensive environmental assessment of all floodplain earthworks, and water monitoring systems in place to accurately measure floodplain harvesting take
- the need for baseline data and information to properly assess the impacts of floodplain harvesting on all valleys across NSW
- policy development, with responses ranging from the need to review the original policy to expediting the policy program around the floodplain harvesting.
- requests for further in-depth consultation targeted at floodplain harvesting.

A small number of stakeholders gave a varied range of feedback and policy suggestions, including that:

- the key focus of policy should be to minimise harvesting of overland flows that are essential for the floodplain environment
- any policy should not provide ‘compensable, private property rights for the extraction of rainfall runoff on developed irrigated land’, with the volume of water take to be offset by reduction in take elsewhere
- the policy will need to be supported by sufficient financial and human resources for adequate compliance and transparent reporting
- a ‘growth in use’ strategy is required to monitor increases in floodplain harvesting with the objective to prevent further harvesting, and rainfall runoff rules should not be amended until accurate monitoring is established
- water management policies should be flexible and adaptable, and rely on the best scientific knowledge available
- policy changes will create division and conflict among agricultural landholders.

The Environmental Defenders Office NSW provided specific recommendations including:

- a complete audit of all earthworks on floodplains and on-farm storages across the northern Basin, with the results made publicly available
- publication of the details of all storages that have been built or upgraded with funding from any on-farm irrigation efficiency programs
- development of a clear, evidence-based monitoring framework as a priority, which will assist with baseline data, compliance and enforcement.
- development of a clear, evidence-based policy regarding adaptive management of floodplain harvesting (including associated structures and storages) as water becomes scarcer due to climate change.
- only licensing the volume assumed to develop the sustainable diversion limits for the Basin Plan in 2012
- not issuing licences associated with any unlawfully constructed works
- not paying landholders compensation under s. 87 of the *Water Management Act 2000* for reductions in floodplain harvesting where historic harvesting has involved the use of unauthorised structures or otherwise unlawful activity

- discarding the proposed accounting framework, notably the proposed 500% annual usage limit and unlimited carryover (to ensure that environmental and downstream needs are met through water accounting for floodplain water access licences), and replacing it with a new accounting framework based on a transparent assessment of environmental and downstream needs, and sustainable diversion limits
- the development of a compliance and enforcement strategy in relation to floodplain harvesting, including in relation to the decommissioning of levees post-trade.