

Department of Climate Change, Energy, the Environment and Water

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Floodplain Harvesting Action Plan – Progress report for Quarter 3 2024

Outcomes for Quarter 3: July to September 2024

December 2024



Acknowledgement of Country

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

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Implementing a robust floodplain harvesting framework

The Floodplain Harvesting Action Plan (Action Plan), released in September 2019, ensures water taken from floodplains across key areas in the northern Murray–Darling Basin is managed and measured within the legal limits set by the Basin Plan 2012 and by NSW water sharing plans. In the Action Plan, the NSW Government committed to:

- use the best available facts, data and scientific analysis to underpin the floodplain harvesting licensing framework and explain this work to you
- set clear rules for floodplain harvesting and consult with you about them
- ensure rules are followed
- improving floodplain harvesting management over time.

Progress to date

This is the seventeenth progress report on the Floodplain Harvesting Action Plan. It shows how the NSW Government has delivered on key objectives outlined in the Action Plan and is making good progress on the remaining objectives.

Importantly, this progress includes the establishment of a legislative framework for the licensing and measurement of floodplain harvesting activities. At the time of this report's publication, the Namoi Valley is the only northern inland valley that has not been integrated into the floodplain harvesting licensing framework.

As of September 2024, of the 32 actions identified in the Action Plan: 22 have been completed, 8 are in progress, and 2 are identified as future actions. Updated target dates for actions in progress are provided within this report.

No new actions have been completed for Quarter 3 of 2024.

Floodplain harvesting licensing and measurement framework

The legislative framework for the measurement and licensing of floodplain harvesting activities were established on 1 July 2022 and 3 February 2023 respectively.

Floodplain harvesting activities were the last major form of water take to be integrated into the licensing framework. Licensing limits and controls water take within legal limits, improving the overall management of NSW water resources. It also provides regulatory certainty for floodplain harvesting water users in these valleys and is integral to implementing the measurement requirements.

The first enforceable controls to reduce and regulate floodplain harvesting are now in place for the Border Rivers, Gwydir, Macquarie, and Barwon-Darling valleys. Available water determinations, which credit water access licence accounts, were made for each valley on:

- 15 August 2022 – Border Rivers and Gwydir
- 1 March 2023 – Macquarie
- 1 April 2023 – Barwon-Darling

Licensing and measurement of floodplain harvesting in these valleys will return significant volumes of water to floodplains, rivers, and creeks. These additional floodplain flows will benefit water birds, native fish, and vegetation, particularly in the internationally recognised Gwydir Wetlands.

Other water licence holders within these valleys will also benefit. The integration of floodplain harvesting activities into the licensing framework means that any reductions in available water determinations are shared more equally across licence categories.

Ahead of the licensing framework commencing in each valley, staff from the NSW Department of Climate Change, Energy, the Environment and Water (the department), Natural Resources Access Regulator (NRAR) and WaterNSW held workshops with licence holders to explain the rules and requirements, the approach to compliance, and answer any questions. These workshops were held in:

- Moree and Goondiwindi on 2 and 3 August 2022 for Gwydir and Border Rivers respectively
- Warren on 23 February 2023 for Macquarie; and
- via webinar on 28 March 2023 for Barwon-Darling.

Further sessions on measurement requirements have also been held for licence holders, and guidance materials developed to further support the framework's implementation. Face-to-face sessions on property measurement plans were held in:

1. Moree from 26 to 29 June 2023 for Gwydir
2. Goondiwindi on 9 and 10 August 2023 for Border Rivers
3. Warren from 31 October to 1 November 2023 for Macquarie
4. Bourke and Walgett from 12 to 14 March 2024 for Barwon-Darling.

The Namoi Valley is the only northern inland valley that has not been integrated into the floodplain harvesting licensing framework. Licensing in the Namoi Valley is still being progressed and it is anticipated that floodplain harvesting access licences will be issued in Q1 2025.

Amendments to the Water Management (General) Regulation 2018

In December 2023, the NSW Government amended the Water Management (General) Regulation 2018 (the Regulation) to strengthen environmental protections and adopt a more precautionary approach to future licensing of floodplain harvesting in unregulated river water sources.

The amendment changes the way that groundwater usage and entitlements are taken into account when calculating proposed floodplain harvesting (unregulated river) access licence entitlements. Previously, only groundwater usage was accounted for in the calculation. Now, the calculation accounts for the greater of historic groundwater usage or groundwater entitlement. This more precautionary approach ensures that floodplain harvesting access licences reflect the irrigation demand of historic crop areas that could not be met by other existing licensed entitlements.

Other changes were also made to:

1. clarify that a model must be adopted after a landholder has an opportunity to make a submission on their proposed entitlement, and before the determination of their final entitlement
2. give landholders another opportunity to make submissions if there are reductions made to their proposed entitlement
3. correct an administrative error in the eligibility criteria for a floodplain harvesting access licence.

Select Committee on Floodplain Harvesting

On 23 June 2021, the NSW Legislative Council formed the Select Committee on Floodplain Harvesting (the Select Committee) to inquire and report on the NSW Government's management of floodplain harvesting. This followed the disallowance of earlier amendments to the Regulation for floodplain harvesting in May 2021.

In December 2021, the NSW Legislative Council released its final report as part of the floodplain harvesting inquiry. In May 2022, and the NSW Government agreed, either fully or partially, with 20 of the 25 recommendations made by the Select Committee. Many of these recommendations were already in line with the NSW Floodplain Harvesting Policy.

For more detailed information about the NSW Legislative Council, legislative amendments, and outcomes of community consultation, please refer to the Department of Climate Change, Energy, the Environment and Water's website at dpie.nsw.gov.au/water/our-work/floodplain-management.

Floodplain Harvesting Action Plan deliverables

Use the best available facts, data, and scientific analysis to underpin the licensing framework and explain this work to you

Table 1. Progress on the first set of actions

Our commitment	Target date	Progress	Updates
1.1 Report on how sensitivity and uncertainty in the model has been treated by the department and how much it affects users	Q4 2019	Complete	Documentation will now be included in the valley-based model reports.
1.2 Report on the significance of additional rainfall runoff due to irrigation and how this is being managed	Q4 2019	Complete	The report for additional rainfall runoff is available on the website. It is proposed that runoff from irrigation areas will not be licensed as floodplain harvesting in certain circumstances.
1.3 Write to individuals to explain the parameters that we will use to work out their licence entitlements	Q4 2020	Complete	Complete for all valleys.
1.4 Publish valley-based model build report	Q4 2022	Complete	Complete for all valleys.
1.5 Publish valley-based model scenario report	Q4 2022	Complete	Complete for all valleys.
1.6 Publish valley-based environmental benefit reports	Q4 2022	Complete	Complete for all valleys.

Our commitment	Target date	Progress	Updates
1.7 Hold a workshop with peak water user groups in northern NSW valleys to provide information about how the modelling approach applied to individual farms is supported by sensitivity testing	Q3-Q4 2019	Complete	Workshop and field trip held with peak water user groups in October 2019 in Moree.
1.8 Hold workshops with stakeholders to explain the model build, model scenario and environmental assessment reports on a valley-by-valley basis	Q4 2022	Complete	Complete for all valleys.

Set clear rules for floodplain harvesting and consult with you about them

Table 2. Progress on the second set of actions

Our commitment	Target date	Progress	Updates
2.1 Publish all independent reviews about policy implementation	Q3 2019	Complete	Reports for the Independent Review of NSW Floodplain Harvesting Policy Implementation and a summary of the probity review into floodplain harvesting licensing are available on the department's website. The results of peer review of modelling reports for each valley are available on the department's website.
2.2 Release a response to each recommendation of the Independent Review of NSW Floodplain Harvesting Policy Implementation	Q3 2019	Complete	See the Floodplain Harvesting Action Plan .
2.3 Release a guideline about how the department is implementing the policy	Q3 2019	Complete	Guidelines are available on the department's website.
2.4 Release proposed water sharing plan and water resource plan rule changes for floodplain harvesting	Q1 2023	Complete	Complete for all valleys.
2.5 Hold workshops with stakeholders to explain the guideline	Q3 2019	Complete	Complete.
2.6 Hold workshops with stakeholders about proposed water sharing plan and water resource plan rule changes	Q1 2023	Complete	Complete for all valleys.

Our commitment	Target date	Progress	Updates
2.7 Release draft entitlements for comment	Q2 2023	Complete	Complete for all valleys.
2.8 Finalise licences and amend water sharing plan and submit water resource plan for reaccreditation	Q1 2025	In progress	Complete for Border Rivers, Gwydir, Macquarie and Barwon-Darling valleys. The Namoi water sharing plan is on track to be amended November 2024 and licences determined in 2025.

Ensure rules are followed

Table 3. Progress on the third set of actions

Our commitment	Target date	Progress	Updates
3.1 Meet <u>Compliance Compact</u> obligations by publishing a program for improved measurement of floodplain harvesting	Q2 2019	Complete	<u>Improvement program</u> available on the department's website.
3.2 Release the final Floodplain Harvesting Measurement Policy	Q4 2019	Complete	The <u>NSW Floodplain Harvesting Measurement Policy</u> is available on the department's website.
3.3 Require licence holders to install telemetry-ready, continuous water-level loggers on all on-farm storages used for floodplain harvesting	Q2 2026	In progress	It is anticipated this action will be completed in 2026 as this aligns with the anticipated primary equipment compliance date for the Namoi Valley. The floodplain harvesting measurement requirements require primary (telemetry enabled) measurement equipment to be installed within 12 months the access licence being credited. To take water in the first 12 months, a secondary device (for e.g., a gauge board) is the minimum requirement. This commitment is complete in the Border Rivers, Gwydir, Barwon-Darling and Macquarie valleys. The primary equipment compliance dates for each of these valleys were: • Border Rivers and Gwydir – 15 August 2023 • Macquarie – 1 March 2024 • Barwon-Darling – 1 April 2024

Our commitment	Target date	Progress	Updates
3.4 Start monitoring and enforcement of the new floodplain harvesting licensing framework through NRAR	Q4 2025	In progress	Under the floodplain harvesting measurement rules, water can only be taken under a floodplain harvesting access licence when compliant metering equipment is in place. NRAR is responsible for enforcing compliance with these rules. The on-ground compliance monitoring program is continuing across all licensed valleys. Desktop assessments and contact with water users has begun and will continue to determine the levels of compliance. From conversations NRAR have had with water users, it is evident that some barriers to compliance include access to dually qualified persons (DQPs) and equipment. NRAR is using the department-built program, Earth Observation Tool, to assist with identifying water take across the licenced valleys.
3.5 Develop a best-practice guideline for floodplain harvesting measuring in partnership with Queensland Government and Murray–Darling Basin Authority	Q4 2022	Complete	The Murray–Darling Basin Authority has developed a draft practice note in consultation with Queensland and NSW governments, as part of the Hydrometric Networks and Remote Sensing Program. The practice note is an internal resource that recognises the differences and similarities between approaches to floodplain harvesting measurement in NSW and QLD.
3.6 Implement best practice guidelines	Q1 2024	Complete	The department has published <u>standards and guidelines</u> to assist water users and duly qualified persons to understand the floodplain harvesting measurement rules. On 3 November 2023, Schedule 2 of the Metering Equipment

Our commitment	Target date	Progress	Updates
			Standard was updated to include a second method (AUSPOS) for establishing survey benchmarks. Following this update, the storage curve and survey benchmark guidelines were updated. The action has been marked as complete; however, updates to the guidelines will occur as required.
3.7 Support the development of technologies that enable better auditing and compliance of floodplain harvesting, including through the department's Water Technology Pilot Program	Q3 2019	Complete	The development of technologies is being supported through the Market engagement policy for metering and telemetry. Development is underway for a Floodplain Harvesting Analytics Tool, funded through the Hydrometric Networks and Remote Sensing program. NRAR has concluded procurement for an external agency to build, develop and deliver a satellite remote sensing tool which will focus on floodplain harvesting. This will assist NRAR in detecting any unlawful floodplain harvesting activities.
3.8 Encourage NRAR to address unapproved flood works on a risk basis to improve outcomes for the environment and downstream water users	Q1 2022	Complete	A whole-of-NSW Government approach to accelerating compliance for high priority unapproved floodplain structures in the Northern Basin is underway under the Improving Floodplain Connections program. This program is jointly funded by the Australian and NSW Governments. More information on the Improving Floodplain Connections Program is available on the department's website.

Improve floodplain harvesting management over time

Table 4. Progress on the fourth set of actions

Our commitment	Target date	Progress	Updates
4.1 Collect floodplain harvesting diversion data by implementing the Floodplain Harvesting Measurement Strategy	Q2 2026	In progress	Measurement requirements for floodplain harvesting are now in place for Border Rivers, Gwydir, Macquarie and Barwon-Darling valleys. Diversion data is now being collected via a combination of primary and secondary device measurement equipment where installed. Collection of data in the Namoi will commence once the licensing framework is implemented.
4.2 Consider opportunities to expand the river gauging network to improve the quantification of return flows from the floodplain to the river	Q3 2024	Complete	All 20 gauging stations have now been installed. The Technical Working Group has approved the commissioning report, and the final Milestone Assessment Reports have been submitted to the Murray Darling Basin Authority (Hydrometric Network and Remote Sensing Program Project Management Office) for assessment.
4.3 Continue to invest in remote sensing to improve our understanding of flood flow breakouts and return flows from the floodplain to the river	Q4 2023	Complete	The department's Water Group delivered the Hydrometric Network and Remote Sensing program using the Fabric OneLake platform. This platform facilitates the uplift of the FPH Analytics Tool as well as other remote sensing products developed under Hydrometric Network and Remote Sensing. The department will continue to invest in activities that expand the use of remote sensing to monitor water presence, volume, and movement across floodplains.

Our commitment	Target date	Progress	Updates
4.4 Undertake modelling to assess the effects of climate change on floodplain harvesting, as well as on downstream water users and the environment	Q3 2021	Complete	Completed as part of the development of the draft regional water strategies.
4.5 Invest in robust monitoring and evaluation programs to better understand the hydrological and ecological effects of floodplain harvesting	Q1 2026	In progress	Monitoring, evaluation, and reporting (MER) is underway to better understand the hydrological and ecological effects of floodplain harvesting. This monitoring is reported within the department's Environmental Outcomes Monitoring and Research Program. Additional resources are required to maintain long-term MER in the northern Murray-Darling Basin. Expansion of MER to the southern Murray-Darling Basin will require substantial additional investment. Measurement data from licensing and measurement of floodplain harvesting will provide important new data for monitoring and evaluating the hydrological and ecological effects of floodplain harvesting. The expected completion date has been updated to provide additional time to collect actual floodplain extraction data.
4.6 Recalibrate models using floodplain harvesting measurement data	From 2026	Future action	This is a future action – 3-5 years of measurement data is required for this recalibration. The final measurement data report is expected at the end of 2024 after which the models will be recalibrated. Accordingly, the earliest start date for any valley will be 2026.

Our commitment	Target date	Progress	Updates
4.7 Improve model capability by explicitly representing flows from the floodplain to the river using all new data and information collected	From 2025	Future action	This action is about a year behind the intended schedule. On 16 June 2023, the department received a draft report on the return flow stages for the first of 3 stages. The final report for stage 1 is expected to be completed in Q4 of 2024. There is a pathway to deliver preliminary investigative work, and the department is committed to completing this important action.
4.8 Review water sharing rules and amend them as necessary to improve the management of floodplain harvesting over time, based on improved data and information	From 2025	In progress	The review of access rules and triggers to protect downstream critical needs that was scheduled for July 2025 was brought forward and the Expert Connectivity Panel established. In July 2024, the panel released its <u>final report</u> outlining recommendations on delivering better water management outcomes across the connected catchments of the northern Basin. This report provides independent advice to the Minister for Water for her consideration and as such is not Government policy. The department is reviewing the panel's final findings to fully understand their potential benefits and impacts, this includes detailed hydrologic and economic modelling of all the panel's proposed changes.