

## NSW Government response to the Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event

Water is a critical, but limited resource in New South Wales (NSW). From 2017 until early 2020, northern inland NSW experienced record drought conditions. Waterbodies dried and rivers stopped flowing, resulting in widespread impacts on many regional towns, industries, aquatic biota including native fish and vegetation.

In early 2020 it finally rained in parts of north-west NSW and southern Queensland and significant water began to flow into rivers. Rain created flows that recommenced and connected the northern tributaries with the Barwon-Darling River. It was important to do everything possible to protect and maximise the benefits from these flows for the most urgent needs.

The department issued section 324 orders under the *Water Management Act 2000* in the NSW Northern Basin to restrict take of the subsequent flows to meet critical human and environmental water needs. This was the first time that such measures had been taken on this scale.

By 20 February, the initial target flows of 60-70 gigalitres were forecast to reach the Menindee Lakes. From 10 March, the Barwon-Darling River was flowing along its full length from Mungindi on the Queensland border, into the Menindee Lakes. Thousands of kilometres of rivers flowed for the first time in many months. Substantial additional rain fell in late March and April, creating flows of 480 gigalitres at Brewarrina. This was followed by May rainfall of 40-50 millimetres across central NSW. By the end of June, the Menindee Lakes had received more than 583 gigalitres of total inflows.

In the interests of transparency and due to impact of decisions made during this event on water users, who would have been able to access flows under water sharing plan rules, an Independent Panel was appointed to provide impartial advice on the management of the 2020 northern Murray-Darling Basin first flush event. The Panel's [final report](#) was released on 7 September 2020 and is available on the department's website.

### How successful was our approach to managing this event?

The Independent Panel found this complex event was generally managed effectively resulting in good outcomes, but better transparency, including communication would have reduced community concerns. The Panel:

- acknowledged that the cumulative flows were the product of a number of rainfall and contributing flow events in many locations, some much larger than initially forecast, in a large and complex basin
- found the decision-making framework and flow forecasting were reasonably robust, but some important improvements can be made
- reported that management of the first flush event achieved some wonderful outcomes for an environment and communities in need
- highlighted that adequately resourced planning would have resulted in better communication, increasing transparency of what was being done and why, and reducing frustration and stress across communities

## The Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event

- was told that the lack of clarity denied water users the ability to plan their operations and denied First Nations/Aboriginal communities the opportunity to celebrate positive cultural outcomes
- reported that the use of temporary water restrictions demonstrated NSW Government's commitment to protecting environmental water and implementing some of the recommendations arising from other reviews
- noted the continued implementation of NSW reforms regarding metering, floodplain harvesting and connectivity is crucial to improving first flush management
- found that first flush events could be successfully managed under temporary water restrictions, but thought that embedding arrangements in the regulatory and policy framework would enhance transparency and certainty

## What improvements did the Panel recommend?

The Independent Panel concluded that positive outcomes were achieved for the environment and community through the first flush event and made 10 recommendations and suggested 22 actions to improve:

- communication of water restrictions to water users and the public
- the decision-making processes within government
- the preparedness of Department of Planning, Industry & Environment – Water (DPIE – Water), WaterNSW and the Natural Resources Access Regulator to manage such events.

Many of the Panel's recommended actions are closely aligned with or are already being implemented through existing projects being undertaken by the department.

The Panel also suggested a timetable for implementing their recommendations. While the Government agrees or agrees in principle with all but one of the recommendations, these will be discussed with the community as part of conversations on existing projects, including the Western Weirs Program and the regional water strategies across the Northern Basin, including in the Border Rivers, Gwydir, Namoi, Macquarie-Castlereagh and Western regions. The strategies are due to be completed in 2021 and 2022.

The Panel recommended embedding the management of first flush events in the regulatory and policy framework for managing drought. There may be some merit in this recommendation, but it will need to be tested to see whether it can be practically and effectively implemented, including discussing possible approaches with the community.

## Acknowledging First Nations peoples' interests in first flush flows

DPIE - Water acknowledges that engagement with First Nations peoples must be improved. Communication on management of the first flush event did not consider the cultural interests and opportunities that could have resulted in cultural outcomes for communities as flows moved along the system.

DPIE - Water is currently establishing a formal partnership agreement with peak Aboriginal groups, to increase self-determination in water management and improve access to water. This will support meaningful ongoing relationships with Aboriginal people and recognises that appropriate engagement and involvement of Aboriginal people in decision-making is core to our service delivery.

## What is the NSW Government already doing?

The Government understands that connectivity is important for keeping our rivers healthy and plays an important role in supporting economic, social and cultural needs. Work that DPIE – Water has already completed in relation to northern basin connectivity can be found at:

[www.industry.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0008/311768/northern-connectivity-brochure.pdf](http://www.industry.nsw.gov.au/__data/assets/pdf_file/0008/311768/northern-connectivity-brochure.pdf)

There are many stakeholders across NSW that have an interest in these types of critical flow events – licence holders, upstream and downstream water users and others with limited access to water for their needs, such as First Nations peoples. DPIE – Water has already commenced work to develop an improved stakeholder engagement and communications approach.

The ‘Northern Basin Temporary Water Restrictions: Targets and Principles’ fact sheet contains a set of interim triggers which will be reviewed and refined and customised to each valley. This work may result in additional targets per valley. The fact sheet is available at:

[www.industry.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0015/301416/northern-basin-restriction-triggers-and-principles-fact-sheet.pdf](http://www.industry.nsw.gov.au/__data/assets/pdf_file/0015/301416/northern-basin-restriction-triggers-and-principles-fact-sheet.pdf)

The department is also progressing work on the broad objectives and guidance on how government may consider and address the needs of the environment during extreme dry periods. An information sheet which defines the needs of the environment during extended dry events, can be found at: [www.industry.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0005/288041/needs-of-the-environment-fact-sheet.pdf](http://www.industry.nsw.gov.au/__data/assets/pdf_file/0005/288041/needs-of-the-environment-fact-sheet.pdf)

## A summary of the Panel’s recommendations to improve first flush management in NSW and the Government’s response

The Panel’s final report, including detailed recommendations and actions, and the proposed timeframes to deliver these can be found at:

[www.industry.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0007/321649/final-report.pdf](http://www.industry.nsw.gov.au/__data/assets/pdf_file/0007/321649/final-report.pdf)

The Panel’s recommendations and key actions are set out below.

### Panel recommendation 1

By the end of 2020, develop first flush arrangements, in consultation with water users, Traditional Owners and communities, that clearly articulate how connectivity within and between water sources in the Northern Basin, and critical human and environmental water needs, will be provided during first flush events.

#### **NSW Government response**

Agree in principle. However, any arrangements to further improve connectivity need to be in consultation with communities. The NSW Government is considering connectivity through the development of the regional water strategies across the Northern Basin and the Western Weirs Program. As part of this work the NSW Government is committed to developing and implementing options that would ensure greater connectivity during first flush events to better support critical human needs and healthier aquatic habitats.

### Panel recommendation 2

Incorporate learnings from the 2020 Northern Basin First Flush event into systems that will be used to manage any future first flush event that arises in the short term by:

- a. updating flow forecasting models

## The Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event

- b. ensuring DPIE-EES is involved in future management
- c. undertaking and publishing a comparison of what outcomes would have been achieved if temporary water restrictions were not put in place
- d. updating models to reflect the capacity of water sources to contribute to meeting downstream targets
- e. revising the objectives, principles and targets used to manage the event having regard to this information (and any further work completed pursuant to recommendation 3 below)
- f. seeking feedback on the revised objectives, targets and principles.

### Proposed actions:

- By end of 2020 undertake and publish the water sharing plan vs section 324 scenarios comparison analysis.
- By end 2021 update flow forecasting models with information from the 2020 Northern Basin First Flush event.
- By mid- 2022 finalise update of the objectives, principles and targets to be used for future first flush events.

### NSW Government response

Agree in principle. Two of the three actions identified by the Panel can be achieved within the proposed timeframes. The action to finalise an update of the objectives, principles and targets to be used for future first flush events by mid- 2022, is contingent on associated initiatives under recommendation 1. Final decisions on objectives, principles and targets should not be made until after this work is completed.

### Panel recommendation 3

Ensure the evidence base and methodology for first flush management is quantified, science-based and made publicly available, including estimated requirements to meet critical water needs (including basic landholder rights and cultural flow requirements that fall within critical water needs).

### NSW Government response

Agree in principle. One action proposed by the Panel is to implement a strategy, developed in consultation with Traditional Owners and Indigenous communities to better understand and address barriers to effectively practicing cultural activities during first flush events, particularly in relation to statutory and other barriers to accessing water by mid-2022.

This needs more time. Conversations with First Nations/Aboriginal communities have commenced in relation to information needs and engagement protocols, as well as values, uses and objectives for water, including those impacted by first flush event management. It is important that this work is progressed in a culturally appropriate way, including respecting the need to take adequate time for effective knowledge exchange. An appropriate timeframe will be determined through these conversations.

The Panel also recommended publishing data, including data relating to cultural flow requirements. The Government is committed to respecting the integrity of cultural data and the wishes of First Nations communities about how their information and data are used, including publication.

## Panel recommendation 4

By 2021 review and update incident management systems for managing first flush events, including to develop a communications plan to support first flush management. As far as practicable, management actions should be communicated prior to being undertaken and the progress of flows and achievement of targets should be communicated as the event unfolds.

### NSW Government response

Agree.

## Panel recommendation 5

Until there are further provisions for first flush event management embedded in the regulatory and policy framework, publish guidance materials which outline how the NSW Government will use temporary water restrictions to manage first flush events.

### NSW Government response

Agree.

## Panel recommendation 6

By end 2020, make any temporary water restrictions required to manage first flush events on a proactive basis (that is, before rain is forecast) to enhance the ability of water users and communities to plan their activities and minimise any potential adverse effects of restrictions.

### NSW Government response

Consider. Water users' rights and the protection of flows through temporary water restrictions (rather than in legislative instruments) has been discussed in many forums in recent years. When communicated effectively to all stakeholders, the use of proactive temporary restrictions can provide a transparent way to give water users the information they need and some time to plan and make decisions.

However, the timing and location for proactive temporary water restrictions must be considered carefully in order to balance the needs of all water users. Further assessment of whether it is possible to define first flush criteria in sufficient detail to allow temporary water restriction orders to be made proactively is needed.

## Panel recommendation 7

Embed the management of first flush events in the regulatory and policy framework for managing drought. This is required to improve certainty that critical water needs will be protected in extreme events, improve predictability for Traditional Owners, communities and water users, and ensure that the lessons learnt from the 2020 Northern Basin First Flush event are not lost with the passage of time and/or changes of agency staff.

Actions proposed are:

### Action

By mid-2022, update incident response guides and extreme events policies to include information about how future first flush events will be managed.

## The Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event

### Action

By end of 2022, complete consultation about provisions that could be inserted into legislation and water sharing plans to support the process of first flush management.

### NSW Government response

Agree in principle. Noting the new resumption of flow rule in the Barwon-Darling water sharing plan, the NSW Government agrees to explore whether inserting future first flush rules in relevant water sharing plans or legislation will provide sufficient flexibility to account for variations between events and across regions.

It is important that we reflect on lessons learned through the recent drought and determine whether there are some circumstances that may require more flexibility to account for the extremely variable and locally specific circumstances that can arise.

Accordingly, this work will be progressed in consultation with the community through several initiatives, including:

- A review of the Extreme Events Policy and supporting incident response guides.
- Development of the regional water strategies across Northern Basin.

### Panel recommendation 8

Improve flow forecasting modelling and real-time monitoring capability, including measurement of extractions and the hydrometric system for inflows and monitoring end of system flows.

### NSW Government response

Agree in principle, subject to discussions with Queensland.

### Panel recommendation 9

Current (and future) reform programs should be accompanied by clear implementation plans and the Government should publish regular reports of progress against these implementation plans on a collective basis. Progress reports to be published every six months.

### NSW Government response

Agree in principle, subject to a revised timeframe of early 2021 for the first report to align with work on interrelated programs.

### Panel recommendation 10

Improve and resource communication coordination and capability, including by establishing a water reform engagement group which includes the full spectrum of interests and impacted parties, including irrigator, Indigenous, environmental, local government, floodplain graziers and riparian water users from both the Northern and Southern basins.

### NSW Government response

Agree.