



I N L A N D  
R I V E R S  
N E T W O R K

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PO Box 528, PYRMONT NSW 2009  
ph 0428 817 282

**web** [inlandriversnetwork.org](http://inlandriversnetwork.org)  
**ABN** 34 373 750 383

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NSW First Flush Assessment,  
c/o Department of Planning, Industry and Environment,  
Locked Bag 5022,  
Parramatta NSW 2124

By email: [independentpanel.firstflush@dpie.nsw.gov.au](mailto:independentpanel.firstflush@dpie.nsw.gov.au)

Dear Dr Wendy Craik and Mr Greg Claydon,

**Comment on NSW DPIE Assessment of take and protection during first flush flows in the Northern Basin.**

The Inland Rivers Network (“IRN”) is a coalition of environment groups and individuals that has been advocating for healthy rivers, wetlands and groundwater in the Murray-Darling Basin since 1991.

IRN welcomes the opportunity to provide comment on the Independent Panel’s Assessment of take and protection during first flush flows in the Northern Basin (IPAFF) which IRN considers a very thorough and valuable record of the events that initiated in February 2020 following much needed rain.

The experiences of First Nation groups, communities, water users and environmental stakeholders who felt NSW agencies failed to consult with them and communicate objectives, as well as the missed opportunities and substantive biases shown to some water users to the detriment of everyone else and the environment is well reflected in the Assessment.

We have provided specific comments on the ten recommendations of the IPAFF in Part 1 of this submission.

The objective timeline of events exposes two other matters that we feel need greater focus. These being the critical role management of floodplain waters plays in achievement of transparent, effective and sustainable whole of basin water use and management and the need

for robust Water Sharing Plans (WSP) to not just “share” water but ensure outcomes which genuinely protect and connect water sources.

Additional comments are provided on these two matters in Part 2.

## **PART 1. Comments on the IPAFF’s ten recommendations.**

### **1. Ensure that water management provides for and promotes connectivity between water sources.**

IRN has long argued the critical importance of connectivity within and between water sources to ensure water sources and their dependent ecosystems are protected and water management is consistent with the objects of guiding legislation. The importance of connectivity has also been identified in various reviews including by the Natural Resources Commission (NRC) that identified weaknesses in WSP priorities to protect water sources and dependent ecosystems.

Current understanding of connectivity within and between all Northern Basin water sources is limited. Knowledge gained from the first flush event will be invaluable in a shift to an overall improved legislative framework to manage first flush events and effectively promote whole of basin connectivity between water sources.

In the interim however the knowledge gained should directly inform the next first flush likely to be under section 324 orders. During this time, IRN is very supportive of further policy work that will provide clear guidelines as to how competing needs are assessed across the system, in line with the original intent of the NSW Water Management Act 2000 (WM Act).

IRN is concerned that the end of system for the Darling River is considered to be the Menindee Lakes, and not the confluence with the Murray. We are very supportive of more clarity in the definitions of ‘end of system’.

Consideration of connectivity should be clearly stated in individual WSPs and further comment is made on these in Part 2.

### **2. Make any temporary water restrictions required to manage first flush events on a proactive basis (that is, prior to specific forecasts of rain).**

IRN strongly supports this recommendation, that temporary water restrictions be published proactively, giving surety and safety to the whole community. Proactive management should be possible with improvements in climate models and better understanding of water flow across the basin.

Like most communities and stakeholders in the Northern Basin, IRN’s individual members and member groups were confused, concerned and frustrated at the lack of consultation and certainty around the management of the first flow in February 2020.

There was a level of angst and tension in communities. With water users having access to some water from the first event, they were especially keen to increase extraction from later events to secure enough water to invest in sowing. In the same areas just weeks before, rivers

had ceased to flow, thousands of fish and other wildlife had perished and towns and communities were fast running out of water.

**3. Until there are further statutory provisions for first flush event management, publish guidance materials which outline how the NSW Government will use temporary water restrictions to manage first flush events.**

IRN is very supportive of the development of better guidelines as an interim measure prior to improved statutory provisions for first flush event management. These guidelines should be developed immediately in consultation with water users, including environmental water managers, Traditional Owners and broader community and address the matters outlined in recommendation 3.

The guidelines should be in plain English, circulated widely and easily accessible on digital platforms and via social media. Use of text message alert system could be useful.

**4. Incorporate learnings from the 2020 Northern Basin First Flush event into systems that will be used to manage any future first flush event that arise in the short term, including by undertaking consultation with communities, Aboriginal people and water users on the objectives, principles and targets.**

As mentioned in recommendation 1 comments above, IRN is very supportive of the past knowledge and experience informing development of systems that will be used for future first flush event management.

It is very important that the feedback from Traditional Owners, communities, water users and environmental stakeholders all be considered and factored into the development of the models for future use.

DPIE –EES should never again be excluded from first flush management decision making forums. Its specialised role and knowledge in water management is critical in the effective management of first flush events achieving its proper purpose.

IRN feels that any perceived conflicts of interest in its role in the water market should be identified and resolved during the initial planning stages of a first flush event.

**5. Take steps to ensure the evidence base and methodology for first flush management is quantified, science-based and made publicly available.**

First flush management that is based on current knowledge, good evidence and quantifiable performance indicators is a critical step in restoring transparency to the process and rebuilding community confidence in the decision making processes.

Cultural flow requirements must be identified as a priority. The requirements for basic landholders rights, stock and domestic rights and harvestable rights, along with the currently undefined requirements for cultural flows can then be used in the development of reasonable use guidelines.

The critical environmental water requirements being used to inform targets must be transparent, robust and public. Where possible they should be determined with the consultation of environmental stakeholders and with reference to long term watering plans.

IRN is supportive of the IPAFF recommendation that hydrological triggers for initiating first flush events should be science based, consistent with the relevant legal framework, linked to community and environmental objectives, and be available to the public.

## **6. Review and update incident management systems for managing first flush events.**

IRN is supportive of the diagram presented in the IPAFF as a basis for the development of an incident management system for managing first flush events.

IRN particularly recommends that local knowledge on antecedent conditions must be fed into the management system. Parched wetlands and river beds need a lot of water to prime them. The cumulative impact of decades of over extraction and expanding floodplain harvesting practices, along with a warming and drying climate, mean that floodplains, wetlands and river beds are often in an extremely parched state by the time a drought breaks and the first flush arrives.

It is vital that equity of access to communication for all community and industry stakeholders is well established in an enhanced communication plan. The use of sufficiently detailed maps is supported as a means to enable compliance by water users and to facilitate immediate NRAR compliance action.

Likewise IRN supports real time mapping of flows and predicted forecasts of progress through the system as a means to increase community understanding of water management. This should include ongoing information on water balance information and event outcomes.

IRN agrees that updates published by the Commonwealth Environmental Water Holder's Office in respect to environmental watering events would be a good model for public updates. Regular daily updates to website information, similar to that done by Queensland is also supported.

## **7. Embed the management of first flush events in the regulatory and policy framework for managing drought.**

Drought conditions are predicted to be more regular occurrences as the impacts of a changing climate continue in NSW. IRN supports the need for first flush events be incorporated into the regulatory and policy framework as part of the ongoing management of drought.

IRN agrees with the recommendation that longer term reliance on section 324 orders alone to manage first flush events will not provide the necessary certainty that first flows will be protected to meet critical needs after extended dry periods.

Ultimately, IRN agrees that changes to the WM Act, the Extreme Events Policy, the Water Sharing Plans and incidental response guides will be required, to enable better management of first flush events. A rigorous and broad process of community engagement and consultation to occur as these are progressed.

The identified key issues about the lack of engagement, inadequate communication and a lack of transparency are inevitable but unsatisfactory outcomes in management of any future events if changes aren't made to the overall statutory and policy framework of such events.

IRN gives in principle support to the suggested examples included in the IPAFF.

Regards the WM Act: IRN supports that it include the objectives for managing first flush and state a requirement for WSPs to include rules for first flush management which provide for connectivity between water sources and the protection of critical needs.

Regarding Extreme Events Policy: IRN supports as necessary expansion of the scope of this policy to sustainably manage water given the significant impacts that climate change are already having on the ecosystems of the Murray Darling Basin and the availability of water.

Improved transparency around the principles allowing access to flows in first flow events is supported and these principles should be consistent across the Basin.

We note "forecast to be met" is included in the first principle. This notion is reliant on improved and reliable forecast modelling of both climate and whole of system flows. Where knowledge is lagging it should be used cautiously in considerations of allowing access to upstream users.

Regarding WSPs: The issue of connectivity between WSPs and effective rules to protect important connecting flows both within water sources and between water sources is an outstanding issue that must be resolved.

IRN supports quantifiable triggers for first flush rules based on the unique local factors pertaining to a WSP as a means to improve transparency in how water will be managed when it is less available.

We note that as a result of the NRC review the Barwon-Darling WSP now has Rule 50 Resumption of flows that aims to protect first flush events in that unregulated water source.

However, because flows in the Barwon-Darling are entirely dependent on tributary inflows from the Northern Basin regulated water sources and their associated unregulated water sources, it is imperative that all WSPs in the Northern Basin contain similar types of rules to the Barwon-Darling WSP Rule 50 Resumption of flows.

Clearly defining how baseflows will be protected in WSPs during low flow and drought conditions is critical to ensuring environmental and water quality outcomes consistent with the WM Act. This assures cultural values are maintained and critical needs are met.

There needs to be strong linkages in the WSP with the objectives of Long Term Water Plans which must be evidence based and regularly adjusted through adaptive management as rigorous monitoring occurs.

Whilst Rule 50 is supported, IRN recognises that section 324 orders may still be required in some situations eg in mitigation of the high risk caused by high water temperature.

Additional comments are provided on WSPs in Part 2 of this submission.

Regarding Incident Response Guides: IRN supports the development of Incident Response Guides as detailed in the table and should include identification of critical needs at each stage of drought.

### **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.**

IRN fully supports world leading approaches to measurement and monitoring of all basin waters including floodplain harvesting in real time. The Murray Darling Basin is Australia's most important river system, containing RAMSAR listed wetlands. It has supported First Nations people for tens of thousands of years.

The roll out of telemetric metering will further inform flow forecast modelling and improve overall understanding of predicted flow behaviour. This initiative will facilitate more precise measurement of extractions and inflows and monitoring end of system flows, so critical in effective management of first flushes.

It is important that this information is accessible publicly. This is consistent with the government commitment to improve transparency and accountability in the use and management of basin waters.

IRN agrees it is very important that NSW work closely with Queensland to monitor and forecast flows entering NSW.

A Basin wide perspective of water management is essential to foster, and to that end, IRN recommends, as a way to improve data available to water management agencies, that an audit of water diversions be conducted Basin wide. A comprehensive basin-wide audit of diversions would help resolve uncertainty and could be used to inform decision-making and long term policy.

The audit should cover the following topics:

- Shortcomings in existing water accounting
- Return Flows
- Floodplain Harvesting
- Transparent Accounting Factors
- Accounting Protocols
- Observed vs. Expected Flows

What is not measured cannot be managed. Coupled with local knowledge, knowing how much water is being diverted and understanding how it is being accounted will help in determining antecedent conditions prior to a first flush.

### **9. Ensure that current (and future) reform programs are accompanied by clear implementation plans and regular communication of progress to the public.**

IRN has been following the implementation of the NSW Government's metering policy as part of the Water Resources Action Plan (WRAP) – the implementation of actions coming out of the 2017 Ken Matthews report.

We consider the implementation of this policy as essential to water management in NSW, and long overdue.

We are aware that the implementation of the Metering and Monitoring Policy has been extended due to the drought. However, we agree with the IPAFF's comments that the public updates on the implementation of this policy, and other policies within the WRAP program has fallen behind the schedule of reporting as agreed to by the NSW Government. Regular public updates are important if the NSW Government has genuinely prioritised rebuilding trust with the community.

IRN has long argued the need for the regulation, monitoring and compliance of floodplain harvesting to be fully captured and reflected in NSW water management legislation, plans and policies. Arguably it is government delay in progressing commitments to do this that have exacerbated some of the community angst identified as part of this Inquiry eg if floodplain water users were licenced a more effective notification process would presumably have been in place at the time of the first flush event.

Recommendation 9 should be stronger in relation to a timeframe for government to bring floodplain harvesting into the regulatory, monitoring and compliance framework as a matter of urgency. Further discussion about floodplain harvesting is included Part 2.

## **10. Improve and resource communication coordination and capability**

IRN strongly agrees that regulatory changes must be communicated to the public before they commence. The level of mistrust in water management in NSW will not dissipate otherwise.

Water literacy needs to be improved across the Basin. Water agencies and Basin Governments need to simplify language and concepts used in water regulation and ensure consistent messaging that is accurate and understandable. Improved understanding and transparency will facilitate open and informed discussion for all stakeholders.

Currently water information provided to the public is confusing and scattered across websites. A comprehensive one-stop shop, which provides up to date and meaningful information to meet the range of interested stakeholders in water regulation, should be considered.

## **PART 2. Two matters which IRN feels should be considered as part of the assessment of the first flush event.**

### **1. Floodplain Harvesting:**

As detailed in the IPAFF, the management of floodplain harvesting during the first flush was a confusing and frustrating element of the event from communities and environmental stakeholders' perspective.

Floodplain harvesting has been a form of unfettered entitlement providing financial gain to an industry at the cost of downstream communities, cultural values and First Nations people and

the riverine environment. This is a significant volume of water to be extracted with no regulation in place. Much of this extraction is in the form of access to first flush events.

It has been the practice of the irrigation industry to prioritise access to free floodplain flows, where available, over other licensed entitlements. The NSW Government has turned a blind eye to this practice and has been very slow to bring it under regulatory provisions.

The free access to unmeasured water from overland flows for the past 30 odd years has been a major, unassessed cost to the environment, cultural values and downstream communities and other industries.

IRN has a number of key concerns regarding the management of floodplain harvesting in NSW Northern Basin which we feel provides the broader political context of our concerns.

a) Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020.

IRN strongly objects to the gazettal of The Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020 (“the Regulation”) allowing for the continued access to overland flows prior to the finalisation of the regulatory process.

The Regulation was gazetted on the same day, Friday 7 February 2020, as the section 324 order to restrict floodplain harvesting take for 3 weeks until 28 February. This restriction was lifted for a number of days on 10 February 2020 allowing access to critical first flush overland flows before they entered streams and rivers.

The Regulation had no justification or relationship to the restrictions placed on water users through the section 324 order. This order has broad powers that enabled it to restrict the take of overland flows.

The Regulation, proclaimed with no public consultation and no notice, gives legal effect to water extraction that is currently unmeasured and unlicensed.

The extraction of overland flows during the February and March first flush events gave priority to a form of water take, with no legal status, other than the Regulation, over the priorities of the WMA to protect the water source and dependent ecosystems, followed by basic landholder rights.

The Regulation must be repealed and no access to floodplain harvesting take be available until all assessment, including environmental assessment, licensing, measurement and monitoring is in place, including relevant management rules in WSPs. This must include rules to protect first flush events from floodplain harvesting.

**Recommendation: That the Independent Panel advise the NSW Government to repeal the Water Management (General) Amendment (Exemptions for Floodplain Harvesting) Regulation 2020 and to maintain a permanent section 324 order on floodplain harvesting in the Northern Basin until such time as all regulation, particularly monitoring and measurement, is in place.**



b) Eligibility criteria for floodplain harvesting works

We also have concerns that the Regulation has given retrospective authorisation of structures on the floodplain that divert flood flows to the detriment of natural flooding and replenishment of river, wetland and floodplain health.

The Regulation, as currently worded, appears to give an exemption to floodplain works that do not have approval. This is a form of retrospective approval for works that have not been assessed under any formal process.

The Regulation appears to provide an exemption for works constructed on or before 3 July 2008 that do not have approval or have not made any application for approval under Part 2 or Part 8 of the Water Act 1912 or the Water Management Act 2000.

The eligibility criteria for floodplain harvesting works, as laid out in the NSW Floodplain Harvesting Policy 2018 and how this criteria has been applied under the Regulation is unclear.

The environmental assessment of eligible works is also unclear and has not been undertaken in a manner to assess the cumulative impact of floodplain works combined with the impact of floodplain harvesting.

We understand that eligible works are currently being assessed and finalised for modelling purposes to establish the volume of floodplain harvesting take to be licenced in each of the Northern Basin valleys and the Barwon-Darling.

The eligibility of works, the type of assessment that was undertaken for works approved under Part 2 or Part 8 of the Water Act 1912 or the Water Management Act 2000, the assessment of eligible works that did not require prior approval and the assessment of cumulative environmental and social impacts of floodplain harvesting are areas that need closer scrutiny and a greater level of transparency.

All and any works should be assessed for their environmental impact prior to issue of a floodplain harvesting licence, and without an assumption that the relevant works are acceptable.

**Recommendation: That the Independent Panel require a clear outline of the process for identifying eligibility and the assessment of eligible works for floodplain harvesting, including a cumulative environmental and social impact assessment. This must occur prior to granting new, compensable private property rights in the form of Floodplain Harvesting licenses.**

c) 'Passive' take from floodplains

IRN is concerned that 'passive' take through floodplain harvesting will continue to be unmanageable if it is included in the assessment and approvals process for licencing floodplain works and volumes of take. 'Passive' take cannot be managed through a 324 order.

An estimate of the volume of ‘passive’ take must be assessed as a high priority. The works that capture ‘passive’ take must be assessed for their environmental impact and removed or modified so that all water take can be regulated.

IRN also does not support the rainfall runoff exemption that has now been included in the floodplain harvesting policy. Rainfall runoff should be managed under the 10% harvestable right of all land owners or covered by a water licence.

## 2. Water Sharing Plans

IRN has a number of immediate concerns about the effectiveness of WSP supporting Water Resource Plans with commencement of the Murray Darling Basin Plan which we feel have not been adequately considered in the IPAFF.

The following WSPs covering major tributaries of the Barwon-Darling are currently with the MDBA for accreditation, before they are to be signed off by the NSW Environment Minister.

- NSW Border Rivers Regulated River Water Source 2020
- Gwydir Regulated River Water Source 2020
- Upper Namoi and Lower Namoi Regulated River Water Sources 2020
- Macquarie and Cudgegong Regulated Rivers Water Source 2020.

We also note that the unregulated WSPs for the Northern Basin are amended plans with various commencement dates.

IRN asks that the Independent Panel recommends an amendment clause under Part 12 of the new Regulated WSPs and amended Unregulated WSPs in the Northern Basin to allow for development of rules to protect first flush events within each water source and between connected water sources.

These rules under Part 12 of the new regulated WSPs should:

- Describe the triggers for first flush management. Clarify that under first flush conditions, access to flows should not be allowed until watering requirements for stock and domestic, native title rights, town water supplies for X years, and the critical environmental needs in the specific water source have been physically met. Allowing take from first flush lows after critical requirements are forecast to be met is not acceptable.
- Describe the process to be followed as set out in the table in the Assessment under recommendation 7.
- Require Incident Response Guides to set out critical needs at each stage of drought.

The management of the first flow in the Macquarie Valley is described in the Assessment on pages 43 and 44, and is a very good example of why, under first flush conditions, the forecast that critical needs will be met should not be a trigger to allow access to flows.

To summarise what the Assessment has reported, 3,000 hectares of the North Marsh reed bed had burnt in October 2019, and had been without any visible surface water since January 2019. The reeds were in critical need of inundation to replenish the root zones.

When the first flows entered the Macquarie in February, the triggers to protect the first flush for the critical environmental requirements of the Ramsar listed Marshes were not adequately

updated, and a determination was made to allow supplementary access of about 12 GL from the peak of the flow.

Water for critical environmental needs, critical human needs and stock and domestic requirements had not been met at the time, they had only been forecast to be met.

“The value of the peak of the flow to the environment was exponentially higher than the same volume of subsequent inflows at lower daily flow rates, as the area of wetland that potentially could have been inundated by the first flow was greatly reduced.”

By announcing supplementary access based on the forecast of critical requirements being met instead of them actually being met, extraction activities were in effect given the highest priority in the valley over critical human and environmental needs.

### **CONCLUSION:**

IRN welcomes the thorough and valuable assessment of the February first flush event undertaken by the Independent Panel and thank members of the panel for it. We feel the knowledge and experience gained from this assessment if taken up by government will facilitate a more effective first flush event next time.

Whilst we give in principle support for all the recommendations we have some qualifications, in particular regarding Floodplain Harvesting and WSPs, which we have outlined above.

We note no timeframe to implement the recommendations has been included in the draft report. Whilst we appreciate that some of the recommendations are dependent on other government initiatives e.g. improved understanding of connectivity between and within water sources as flow forecasting data becomes more reliable as a consequence of the telemetric metering rollout, a timeframe should be set to review the progress of the recommendations.

IRN recommends that a similar assessment review of the next first flush event should occur regardless of whether it occurs via a section 324 order or within the statutory and regulatory framework recommended with this assessment.

Yours sincerely



Anne Reeves  
Hon Secretary